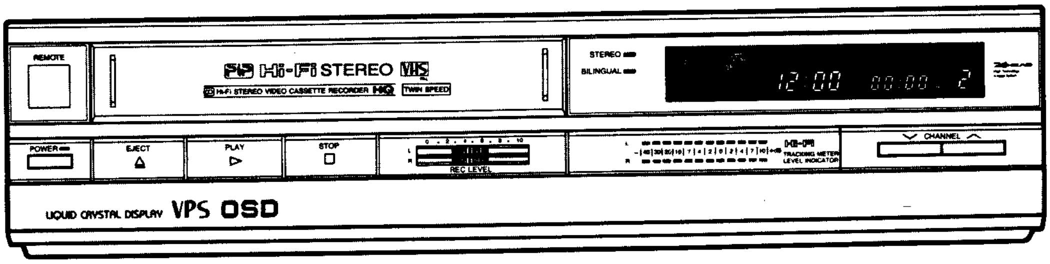
VHS
PAL

HQ
High Quality
Hi-Fi
STEREO

SERVICE MANUAL

SVM-P8-011-1E
68139 - 082 - 110

VIDEO CASSETTE RECORDER


REMOTE
Hi-Fi STEREO VHS
Hi-Fi STEREO VIDEO CASSETTE RECORDER HQ
TWIN SPEED
STEREO
BILINGUAL
12:00 00:00 2
POWER
EJECT
PLAY
STOP
REC LEVEL
Hi-Fi
TRACKING METER
LEVEL INDICATOR
CHANNEL
LIQUID CRYSTAL DISPLAY VPS OSD

SPECIFICATION

Format	VHS PAL standard
Video Recording System	1) Rotary,Azimuth four-head herical scanning system 2) Luminance ; FM azimuth recording 3) Colcr ; Down converted subcarrier phase shifted direct recording
Television System	PAL color and B/W signal
Audio Recording System	Normal : Mono Hi-Fi : Stereo (2 Carrier FM azimuth recording)
Tape Width	12.65 mm (1/2 inch)
Tape Speed	SP : 23.39 mm/sec LP : 11.70 mm/sec
Recording/Playback Time	SP : 4 hours with E-240 type LP : 8 hours with E-240 type
FF/REW Time	Less than 6 min. with E-120
Heads	Video : 4 rotary heads Audio : 2 rotary heads(Hi-Fi) Audio/Control : 1 stationary head (Liner) Erase : 1 full track erase 1 audio track erase (Liner)

Video	
Input	0.5 to 2.0 Vp-p ;75ohm unbalanced
Output	1.0 Vp-p ; 75 ohm unbalanced
Signal-to-Noise Ratio	Batter than 43 dB (SP) Batter than 40 dB (LP)
Horizontal Resolution	More than 240 Lines
Audio	
Input	AUDIO IN (L,R) jack (RCA) ; -8dBm, 47K ohm unbalanced
Output	AUDIO OUT (L,R) jack (RCA); -6dBm, 1K ohm unbalanced
Dynamic Range	Better than 80dB (Hi-Fi)
Wow-Flutter	Less than 0.005% (Hi-Fi)
Frequence Characteristice	20 -20000 Hz (Hi-Fi)
Receiving Channel	VHF LOW, VHF HIGH, UHF
Power Requirement	220V AC/50Hz
Power Consumption	Approx. 48 watts
Operation Temperature	41 F-104 F (5 C-40 C)
Operation Humidity	10 %-75 %
Weight	9 . 2 Kg
Dimensions	420 (W) x 93 (H) x 367 (D) mm

OCTOBER.1989

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1.GENERAL DESCRIPTION

1-1. SAFETY PRECAUTIONS

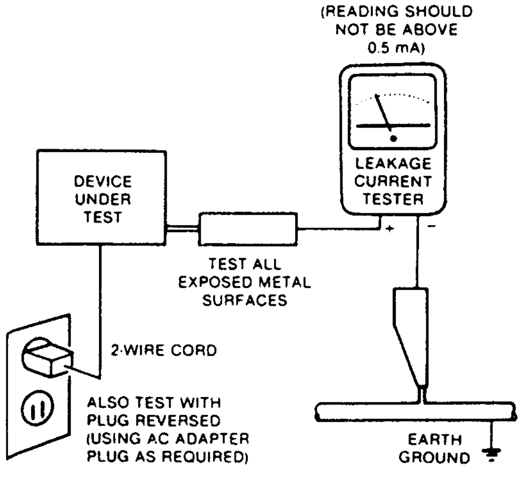
1. **Before returning a Video Cassette Recorder to the customer,** always make a safety check of the entire instrument, including, but not limited to the following items:

a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for serviceing convenience. (2) When reassembling the instrument, be sure to put back in place all protective devices, including, but not limited to nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks.

Do not operate this instument or permit it to be operated without all protective devices correctly installed and functioning.

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) excessively wide cabinet ventilation slots, and (2) improperly fitted and/or incorrectly secured cabinet covers.

c. **Antenna Cold Check**-With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in trun to each tuner antenna input exposed terminal screw and, to each of the coaxial connectors. If the measured resistance is less that 1.0 megaohm or greater than 5.2 megaohm, an abnormality exists that must be corrected before the instrument is returned to the customer.


(READING SHOULD NOT BE ABOVE 0.5 mA)
LEAKAGE CURRENT TESTER
+
-
DEVICE UNDER TEST
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

AC Leakage Test

Repeat this test with the instrument AC switch in the off position.

d. **Leakage Current Hot Check** - With the instrument completely reassembled plug the AC line cord directly into a 220V(240V /UK) AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) *C101. 1 Leakage Current for Appliances* and Underwriters Laboratories (UL) *1410, (50.7)*. With the instrument AC switch first in the on position and then in the off position, measure form a known earth ground (metal waterpipe, condult, etc) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screwheads, metallic overlays, controls shafts, etc).,especially any exposed metal parts that ofter an electrical retune path to the chassis. Any current measured must not exceed 0.5milliamp. Reverse the instrument power cord plug in the outlet and repeat test.

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR CONNECTING ANTENNA OR ACCESSORIES.

e. AC Leakage Test

Avoid shock hazards. The television instrument, accessory, or cables(s) to which this VCR is connected should have the applicable sections of the antennas cold check and the leakage current hot check performed. Do not connect this VCR to a TV antenna, cable or accessory that exhibits excessive leakage currents.

2. Read and comply with all caution and safety related notes on or inside the VCR cabinet and chassis.

3. **Design Alteration Warning** - Do *not* alter or add to the mechanical or electrical design of this Video Cassette Recorder. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this instrument and create a hazard to the user. Any design alterations or additions may void the manufacturer's warrantyand may make you, the servicer responsible for personal injury or property damage resulting therefrom.

4.Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges, b. near thermally hot parts- be sure that leads and components do not touch thermally hot parts c. the AC supply, and d. antenna wiring. Alway inspect in all areas for pinched, out-of place, or frayed wiring. Do not change spacing between components, and between components and the printed circuit board. Check AC power cord for damage.

5. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damaged and, if necessary, take corrective action to remove any potential safety hazard.

6. PRODUCT SAFETY NOTICE

Some electrical and mechanical parts have special safetyrelated characteristics which are often not evident from visual inspecition, not can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a (*) or (!) on schematics and parts list. Use of a substitute replacement that does not have the same safety charateristics as the recommended replacement part might create shock, fire, and/or other hazards. Products Safety is under review continuously and new instructions are issued whenever appropriate.

Electrostatically Sensitive (ES) devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices*. Examples of typical ES devices are integrated circuits and some field-effect transistor and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handing any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to appling power to the unit under test.

2. After removing an electrical assembly equipped with Es devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a *grounded-tip* soldering iron to solder or unsolder ES devices.

4. Use only an *anti-static* type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.

5. Do *not* use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do *not* remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devies are packaged with leds electrically shorted together by conductive foam. aluminum foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

1-2. GENERAL INFORMATION

Stereo video recorder conforming to the Hi-Fi VHS format, assuring high-quality sound recording and playback with independent rotary audio heads exclusively for Hi-Fi audio recording and playback.

Selectable audio monitoring, Hi-Fi stereo orlongitudinal audio track or both mixed (useful for listening to Hi-Fi stereo together with dubbed narration, for example).

*** VPS (Video Programme System) decorder built in.**

Converts the programmeed timer data into VPS codes for VPS recording; so you can record even delayed broadcasts accurately and automatically.
(VPS broadcasts are available only from TV stations in West germany.)

*** VHS HQ Picture Quality**

This VCR incorporates VHS HQ (High Quality) circuitry for improved picture quality. It is fully compatible with earlier VHS VCR'S.

*** 1 YEAR / 8 EVENTS TIMER**

*** One Touch Recording (O.T.R)**

Two touch buttons permit automatic timer recording without the need for numerous programming steps. Just enter starting time and length of desired programme up to 24 hours before it airs. VCR will tune on at the correct time, record the programme, and automatically shut off.

*** Tape Counter and Memory Stop Feature**

The tape counter is used for finding a particular point on a pre-recorded.

*** A Fine Still Picture / A Fine Slow Picture**

The pause / still and slow button can be used for the still picture and slow motion picture during playback.

*** PIP (Picture in picture)**

You can watch the TV broadcast through the sub screen with play the VCR.

*** Picture Search**

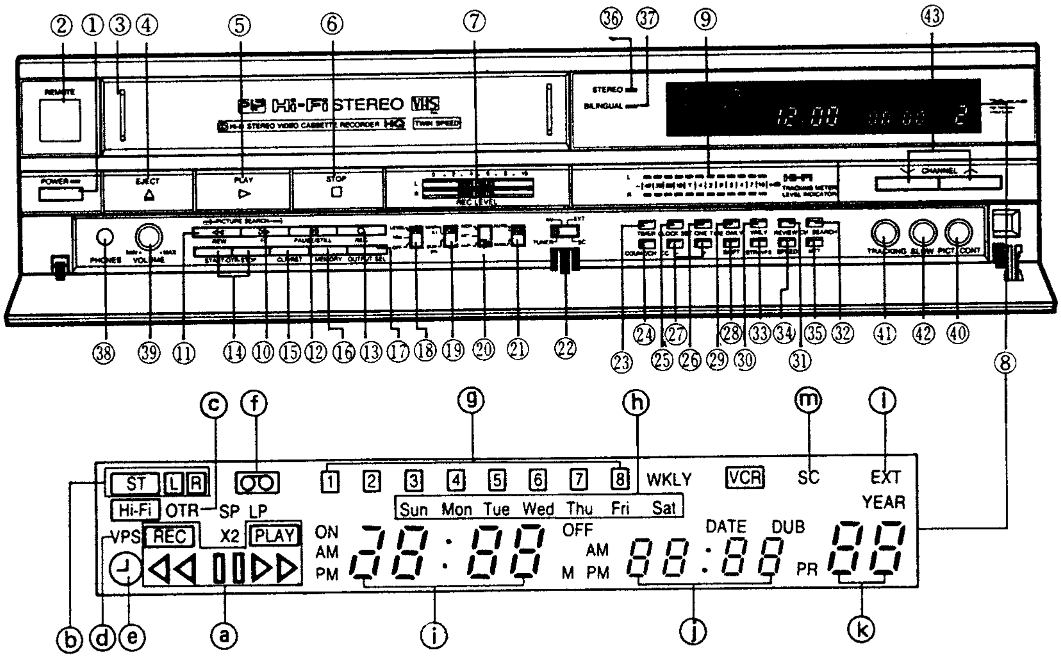
The fast forward and rewind buttons can be used for picture searching when you are playing a tape.

*** 89 CH Frequency Synthesizer Tuner with 60 Channel Storage Capacity.**

*** Watch one TV programme while recording another**

1-3. OPERATING CONTROLS AND FUNCTIONS.

1-3-1. FRONT VIEW


②①③④ ⑤ ⑥ ⑦ ㊱ ㊲ ⑨ ㊸
HQ Hi-Fi STEREO VHS
STEREO
BILINGUAL
REMOTE
POWER
EJECT
PLAY
STOP
REC LEVEL
CHANNEL
PHONES
VOLUME
TRACKING
PICT CONT
㊳ ㊴ ⑪ ⑭⑩⑮⑫⑯⑬⑰⑱⑲ ⑳ ㉑ ㉒ ㉔㉗ ㉘㉝㉞㉟㉜ ㊶ ㊷ ㊵
㉓ ㉕㉖㉙㉚ ㉛ ⑧
ⓒ ⓕ ⑨ ⓗ ⓜ ⓛ
ST L R
Hi-Fi OTR SP LP
VPS REC X2 PLAY
1 2 3 4 5 6 7 8 WKLY VCR SC EXT
Sun Mon Tue Wed Thu Fri Sat
YEAR
ON AM PM
OFF AM M PM
DATE DUB
PR
ⓑⓓⓔ ⓐ ⓘ ⓙ ⓚ

1. POWER Button

Turns the VCR on and off. (If the VCR is off, inserting a cassette will automatically turn it on.) The indicator above the POWER button will light.

2. INFRARED REMOTE Sensor

Receives signals from the remote control.

3. Video Cassette Compartment

Push the cassette gently through the door until you feel the VCR begin to pull the tape into the compartment. The cassette-in indicator in the display will light.

4. EJECT Button

Ejects the cassette from the VCR.

5. PLAY Button

Starts playback. If you insert a cassette with the tab removed, the tape will automatically play.

6. STOP Button

Stops whatever the VCR is doing (record, playback, rewind, or fast forward).

7. Hi-Fi audio recording level control (Hi-Fi REC level)

The recording level of Hi-Fi audio signals can be manually adjusted when the ALC switch is in the MANU position. For adjustment, slide these controls referring to the audio level indicators (9) ; the upper for left channel and the lower for right channel. When the squares up to 0 dB light with the loudest signal being applied, the recording level is optimum.

8. Fluorescent display Section

a) Symbolic Mode Indicator
Illuminates to give quick, easy visual reference of the operating mode. Combination of 6 different symbols indicate 9 operating modes.
b) AUDIO OUTPUT Indicator
Illuminates to indicate audio output is Hi-Fi stereo, LCH, or RCH.

(Note : This indicator is off when AUDIO MONITOR SELECT switch is in NOR position).

c) OTR (One Touch Recording) Indicator
* This indicator lights when express recording has been activated with the START-OTR-STOP buttons.

d) VPS Indicator
Illuminates when programme recording is VPS.
e) Timer Indicator
This indicator lights when the VCR has been turned off and programmed for a timer recording. The VCR must be turned off to activate the timer recording mode.
f) Cassette-in Indicator (📼)
This indicator lights when a cassette is properly inserted in the VCR.
g) Program Number Indicator
Illuminates for program recording.
h) Day Indicator
Illuminates for continuous day indication.
i) Time Display
Illuminates for the time and the start time in program recording.
j) Show TAPE Counter, Real channel, or the OFF time in program recording. Also show the month and the day in power OFF.
k) Illuminates for the year in POWER off and preset channel.
l) EXT indicator
Illuminates when the SOURCE SELECT switch is set to EXT.
m) SC indicator
Illuminates when the SOURCE SELECT switch is set to SC.

9. Audio Level/Hi-Fi Tracking Indicators

These indicators, one for left channel and the other for right channel, show the recording level of Hi-Fi audio signals during recording. During playback, these show the playback level of audio signals. The left-channel indicator also functions as a Hi-Fi tracking meter, depending on the setting of the LEVEL INDICATOR switch.

10. FF/FORWARD SEARCH Button

To fast forward the tape, press this button while in the Stop Mode. To View the speeded-up picture in the forward direction for programme search, press this button in PLAY mode.

11. REW/REVERSE SEARCH Button

To rewind the tape, press this button while in the Stop mode. To view the speeded-up picture in the reverse direction for programme search, press REC or PLAY button to cancel this mode.

12. PAUSE/ STILL Button

Press to stop the tape temporarily to avoid recording of unwanted material in RECORD mode or to view a still picture in play mode.
Press REC or PLAY button to cancel this mode.

13. REC Button

Press REC button to begin recording.

14. START-OTR- STOP Buttons

The START and STOP buttons are used for OTRrecording.
* Press the STOP button twice if you wish to start recording immediately. Each time you press STOP the VCR will record for another 1/2 hour within 2 hour and another 1 hour within from 2HR to 5HR.
(You can set the STOP button from 30 minutes to 5 hours.)
* Press the START button if you want to delay the beginning of your recording. Continue to press START until the time you wish to begin recording appears in the fluorescent display. Then press the STOP button for the time you want the VCR to record.
* Details sre on page 28.

15. CLR/ RESET Button

Use to reset the counter to " 0000 " or to clear the Timer setting programme.

16. MEMORY Button

Press this button. While rewinding, the tape will stop automatically when the counter reaches exactly " 0000 ". But if the counter is near " 0000 " (" 9995 " -" 0005 ") at first, it will be operated like this.

17. OUTPUT SEL Button

For selecting the audio output from the Audio output terminals (Lch and Rch), the headphone, and RF out. (Note: Audio monitor select switch have to be in Hi-Fi position).

18. LEVEL INDICATOR Switch

Selects the funtion of the audio level /Hi-Fi tracking meter.
OFF: to turn the meter off.
LEVEL: to obtain the indication of audio level.
TRK: to use meter for Hi-Fi tracking adjustment.

19. TUNER SOUND SELECT Switch

Selects the desired soundtrack to be recorded on the normal audio track. Both Soundtracks will be recorded on the Hi-Fi audio track with the main one on channel L and the sub one on channel R.
MAIN (L) : to record the main sound track (local language on stereo programme).

SUB (R) : to record the bilingual programme, R CHANNEL on stereo programme).

20. AUDIO MONIOR SELECT Switch

Selects the audio tracks to be listened to. This switch is effective for all audio outputs (RF OUT, HEADPHONE, and AUDIO OUT).
NORM : to listen to the sound on the normal audio track.
MIX : to listen to the mixed sound of Hi -Fi and normal audio tracks (for example, to enjoy Hi-Fi audio whlie at the same time listening to a narration dubbed onto the normal audio track).
Hi-Fi : to listen to the sound the Hi-Fi audio track.

21. ALC (AUTOMATIC LEVEL CONTROL) Switch

Hi-Fi audio recording level is automatically adjusted to prevent over-level recording in AUTO positio. Hi-Fi audio recording level can be manually adjusted with the Hi-Fi REC LEVEL slide controls in MANU position.

* Playback level has no relation to the Hi-Fi REC LEVEL controls.

* The recording level of normal audio signals is always adjusted automatically regardless of the setting of the ALC switch.

22. SOURCE SELECT Switch

For selecting the recording input signal.
TUNER : To record signals coming from the built-in tuner.
AV : To record signals coming from a unit connected to the rear panel AUDIO / VIDEO socket.
SC : To record the video signal and the normal audio signal from the built-in tuner and the Hi- Fi audio signal from the rear panel AUDIO IN connectors.
When Recording FM simulcast TV programmes, use this position
EXT : To record signals coming from a unit connected to the rear panel AUDIO IN and VIDEO IN connectors.

23. TIMER Button

Press this button after programming for unattended recording. Press to stop time recording.

24. COUNT/CH CC Button

Press this button to switch between the real channel display and the tape counter display in the VCR Fluorescent display section.

25. CLOCK SET Button

Press this button for clock setting.

26. ONE TIME Button

Press this button when you want to preset the time for unattended recording. The entire display will change to the time set mode.

27. " + " " - " Button

Press these button for timer recording (one timer, weekly, daily), selection of a real channel, and MFT operation.

28. SHIFT Button

Press this button to go to the next step while you are doing CLOCK setting, TIMER recording, or the selection between CH and CC.

29. DAILY Button

Press this button when you want to record the same time daily (Monday-Friday).
The entire display will change to the time set mode.

30. WKLY Button

Press this button when you want to record to record the same time weekly.
The entire display will change to the time set mode.

31. REVIEW Button

Press this button when you want to review the timer programme.

32. CH. SEARCH Button

Press this button for automatic channel search.

33. STR/VPS Button

* Press this button for pre-tuning the built-in tuner to TV stations in your area when obtained real channel mode with (24) button.
* Remove VPS recording by pressing
in the timer set mode. Because initial state of this button is VPS ON.

34. SPEED Button

Press this button to select speed mode.

35. MFT Button

Use to tune for fine picture. After pushing MFT button, control (+) and (-) button to show better picture.

36. STEREO Indicator

Lights when a stereo programme is being received.

37. BILINGUAL Indicator

Lights when a bilingual programme is being received.

38. Headphone Jack (HEADPHONE)

Connect a set of headphone for monitoring or private listening.

39. HEADPHONE LEVEL Control

Adjusts the level of audio output from the headphone jack.

40. PICTURE SHARPNESS Control

Turn this knob clockwise to make the picture sharper. Turn counterclockwise to give the picture a softer tone. It is effective only for playback pictures. (No effect for recording).

41. TRACKING Control

Use this control to eliminate noise bars, If observed during playback. Hi-Fi audio tracking can also be optimised using this control. When noise or breaks are sensed in the reproduced Hi-Fi sound, perform tracking adjustment. For this purpose, set the LEVEL INDICATOR switch to TRK and turn this control so that the greatest number of squares of the left channel audio level indicator light. (Only the left channel indicator lights in this case.)

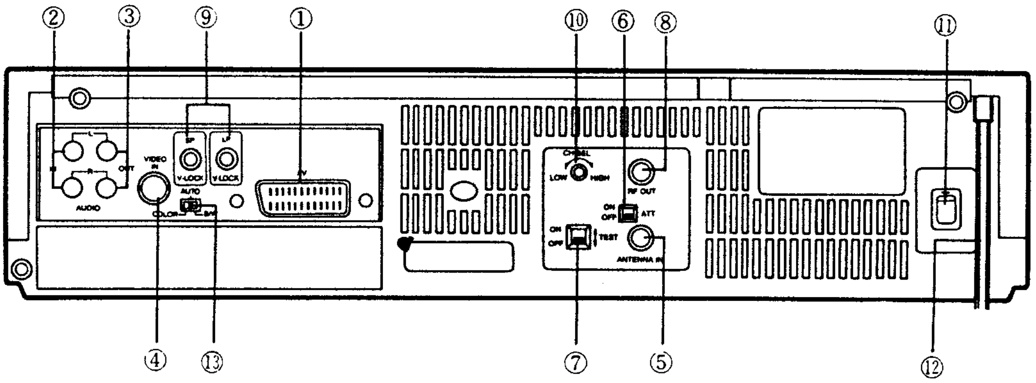
42. SLOW TRACKING Control

In slow playback noise or black and white streaks may appear on your TV screen.
If this occure, rotate the slow TRACKING CONTROL in either direction until you see a clear picture.

43. CHANNEL UP (△) or DOWN (▽) Button

Press and hold the UP(△) DOWN (▽) side to review quickly preset channels which are higher or lower then the currently tuned preset channel. Release the button when the desired channel number appears on the FDP (fluorescent display panel).

1-3-2.REAR PANEL VIEW



1. AUDIO /VIDEO Socket

A 21-pin standardised audio/video input/output socket for the connection to a stereo TV equiped with the same type of socket. The audio output can be selected with the AUDIO MONITOR SELECT switch.

2. AUDIO OUT Connectors

Connect to other audio source for recording sound when SOURCE SELECT switch is in EXT position.

3. AUDIO OUT Connectors

Both Hi-Fi and normal audio signals can be odtained from these connectors. The output can be selected with the AUDIO MONITOR SELECT switch.

4. VIDEO IN Connector

Connect to other video source for recording video when SOURCE SELECT SWITCH is in EXT position.

5. ANTENNA IN Connector

Connect an aerial to this connector.

6. Attenuator Switch (ATT)

Set to OFF to receive broadcasts from distant stations. Set to ON to receive broadcasts of high field strength. Use a screwdriver for setting this switch.

7. Test Signal Switch (TEST)

Set to ON when tuning your TV receiver for the video channel. A test signal in the form of two vertical white bars will be availble.

8. RE OUT Connector

Connect to the aerial connector of a TV receiver through the aerial cable (provided).

9. V. LOCK ADJUSTMENT SCREW

When operating in the Still mode adjust this screw to eliminate some vertical vibration of the picture by using a screwdriver.

10. CHANNEL SELECTOR

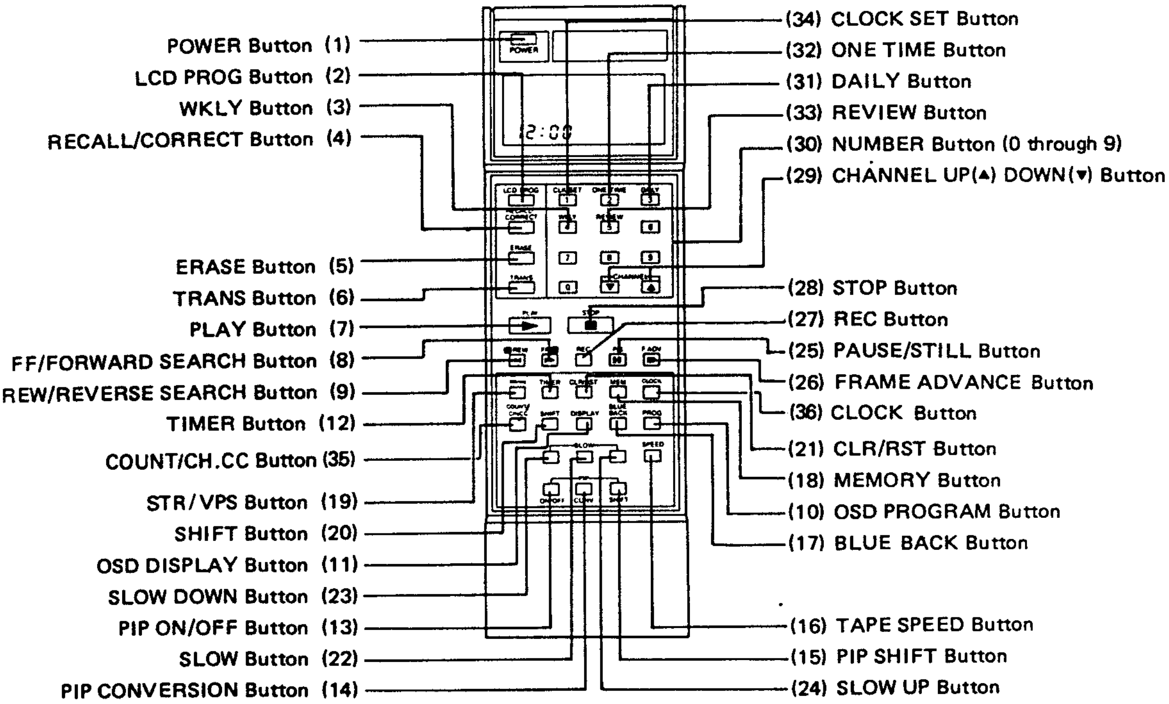
11. Main Power switch

12. Power Cord

13. VIDEO MODE SELECT Switch

* B/W (Black and White) mode
Show B/W screen subtracted color tape, check this switch postion.
* AUTO mode
If video signal has nice color signal, show color screen. But not or if color signal is noisy, show B/W screen.
* Color mode
Show color screen whenever video signal has color signal.

1-3-3. REMOTE CONTROL


POWER Button (1)
LCD PROG Button (2)
WKLY Button (3)
RECALL/CORRECT Button (4)
ERASE Button (5)
TRANS Button (6)
PLAY Button (7)
FF/FORWARD SEARCH Button (8)
REW/REVERSE SEARCH Button (9)
TIMER Button (12)
COUNT/CH.CC Button (35)
STR/VPS Button (19)
SHIFT Button (20)
OSD DISPLAY Button (11)
SLOW DOWN Button (23)
PIP ON/OFF Button (13)
SLOW Button (22)
PIP CONVERSION Button (14)
(34) CLOCK SET Button
(32) ONE TIME Button
(31) DAILY Button
(33) REVIEW Button
(30) NUMBER Button (0 through 9)
(29) CHANNEL UP(▲) DOWN(▼) Button
(28) STOP Button
(27) REC Button
(25) PAUSE/STILL Button
(26) FRAME ADVANCE Button
(36) CLOCK Button
(21) CLR/RST Button
(18) MEMORY Button
(10) OSD PROGRAM Button
(17) BLUE BACK Button
(16) TAPE SPEED Button
(15) PIP SHIFT Button
(24) SLOW UP Button

1. POWER Button

Power on and off the VCR.

2. LCD PROG Button

Press this button to bring Remote control to LCD normal pragramming for programming the timer.

3. WKLY Button (Only LCD Programming)

Press this button when you want to record the same time weekly. The entire display will change to the time set mode.

4. RECALL/CORRECT Button

Press this button to LCD programme like CLR/RST button in your VCR's set.

5. ERASE Button

Press this button to erase only LCD programme.

6. TRANS Button

Press this button to transfer LCD progamme from Remote Control to your VCR's set.

7. PLAY Button

Starts playback.

8. FF/FORWARD SEARCH button

To fast forward the tape, press this button while in the Stop mode. To view the speeded-up picture in the forward direction for programme search. Press this PLAY mode.

9. REW/REVERSE SEARCH Button

To rewind the tape press this button while in the Stop mode. To view the speeded up picture in the reverse direction for programme search, press this button in PLAY mode.

10. OSD PROGRAM Button

Press this button to programming the timer with OSD.

11. OSD DISPLAY button

Press this button to display on TV screen the operating state of the VCR the time and tape counter.

12. TIMER Button

Press this button after progamming for unattended recording.
Press to stop timer recording and O. T. R . recording.

13. PIP ON/OFF Button

Press this button to watch to watch TV broadcast through the sub screen with playing the VCR.

14. PIP SHIFT Button

Press this button to convert the main screen into the sub screen on the state of PIP ON

15. PIP SHIFT Button

Press this button to shift the sub screen counter clockwise on the state of PIP ON

16. TAPE SPEED button

Press this button to sleect speed mode 3

17. BLUE/PICTURE Button

When it is difficult to see OSD contents that insetted TV screen in programming the timer with OSD press this button to select blue screen.

18. MEMORY Button

Press this button. While rewinding, the tape will stop automatically when the counter reaches exactly " 0000 ".

19. VPS Button

Press for VPS recording in the timer set mode. Because initial state of this button is VPS OFF.

20. SHIFT Button

Press this button to go to the next step while you are doing TIMER RECORDING OR THE SELECTION BETWEEN CH AND CC.

21. CLR/RST Button

Use to reset the counter to " 0000 ".

22. SLOW UP Button

Press to a slow motion picture during playback.

23. SLOW DOWN Button

Press the SLOW DOWN button to see the slower slow motion picture.

24. SLOW UP Button

Press the SLOW UP button to see the faster slow motion picture.

25. PAUSE /STILL Button

Press to stop the tape tempotrary to avoid recording of unwanted material or to view a still picture in play mode. Press to play button to cancel this mode.

26. FRAME ADVANCE Button

If the of your VCR set has much noise in STILL mode when playing, you can find less noisy scene with playing little by pressing this button.

NOTE : If tape condition is bad , you may not find nice scene.

27. REC Button

Press REC Button to begin recording.

28. STOP Button

Stops whatever the VCR is doing (record, playback, rewind, or fast forard).

29. CHANNEL UP (△) OR DOWN (▽) Button

Press and hold the UP / DOWN side to review quickly preset channels which are higher or lower than the currently tuned preset channel. Release the button when the desired channel numder appears on the FDP (fluoresceent display panel).

30. NUMBER button (0 through 9)

Select any channel (whether or not it is in the tuner scan list)by pressing two buttons. (Press " 0 " then " 8 ", for channel 8.)
These buttons are also ueed for setting the clock and programming the timer.

31. DAILY Button (Only LCD Programming)

Press this button when you want to record the same time daily.
The entire display will change to the time set mode.

32. ONE TIME Button (Only LCD Programming)

Press this button when you want to preset the time for unattended recording.
The entire display will change to time set mode.

33. REVIEW Button

Press this button when you want to review the timer programme.

34. CLOCK SET Button

Press this button for clock setting, in only OSD programme mode.

1-4. ABBREVIATIONS

4.43MHz : Color Sub Carrier (PAL)

ACC : Automatic Color Circuit
ACK : Automatic Color Killer
ADD : Adder
AFC : Automatic Frequency Control
AFT : Automatic Fine Tuning
AGC : Automatic Gain Control
AL : Always
ALC : Automatic Level Control
AMP : Amplifier
APC : Automatic Phase Control
AUD : Audio
AUX : Auxillary

BATT : Battery
BE : Burst Emphasis
BD : Burset De-Emphasis
BH : Power Supply for Selecting VHF High Band
BL : Power Supply for Selectiong : VHF Low Band
BPF : Band Pass Filter
BU : Back Up

C.FG : Capstan Frequency Generator
C.FREERUN : Capstan Free Run
C. MEMORY : Counter Memory
C.SYNC : Composite Sync
C. RESET : Counter Reset
C.REVERSE : Counter Reverse
C/R : Cue/Rev
CAFC : Capstan Auto Frequency Control
CAPC : Capstan Auto Phase Control
CATV : Cable TV
CAR : Carrier
CB : Carrier Balance
CAP : Capstan
CCD : Charge Coupled Devices
CH : Channel
CHAR : Character
CHROMA : Chrominance
CM : Capstan Motor
CNT : Counter
COM : Common
COMP : Comparator
COMPE : Compensator
CON : Control
CONV : Converter
CST : Casssette
C-EMP : Current Emphasis
C-ERR : Capstan Error
CM-RUN : Capstan Motor Error
CAM.P : Camere Pause
CE : Earom OSD Enable Out

DO : Earom S. Data Out
DI : Earom S. Data In
DRUM.S : Drum Sensor (H'd Switching)
DAVA : Data Available Of VPS.
D.FG : Drum Frequency Generator
D.M.M : Delayed Monostable Multivibrator
D.O.P : Drop Out Pulse
D.O.C : Drop Out Compensator
D.PG : Drum Phase Generator
D/A : Digital-to Analog
D/C : Dark/Clip
D/W : Dark/White
D.AFC : Drum Auto Frequency Control
DE-EMPH : De-Emphasis
DEM : Demodulator
DET : Detector
DEV : Deviation
DL : Delay Line
D.LIM : Double Limitter
DLYD : Delayed
DM : Drum Motor
DN : Down

E-E : Electronic-to Electronic
EMPH : Emphasis
ENV : Envelope
EQ : Equalizer
EXT : External

F.ADV : Frame Advance
F.V : Frequency to Voltage Converter
F.FWD : Fast Forward
FB : Feed Back
FH : Frequency Horizontal
FG : Frequency Generator
FM : Frequency Modulator
FSC : Sub Carrier Frequency
FWD : Forward
F/R/M : FF/REW/Motor Control

GEN : Generator
GND : Ground

HPF : High Pass Filter
HSS : Horizontal Sync Separator

I/O : Input /Output
IF : Intermediate Frequency
INJ : Injector
IR : Infrared
IL : Current Limit

L/C : Luminance/Chrominance
LED : Light Emitting Diode
LIM : Limitter
LPF : Low Pass Filter
LS : Lactch Strode
LUMA : Luminance

M.C : Main Converter
MIX : Mixer
MM : Monostable Multivibrator
MFT : Manual Fine Tunning
MOD : Modulator
M.SFT : Mecha Shift

NR : Noise Reduction
N.C : No Circuit
NORM : Normal
NTSC : National Television System Committee

OSC : Oscillator
OTR : One Touch Recording

P.LED : Power LED
PB : Play Back
P.CONT : Power Control
PG : Pulse Generator
PIF : Picture Intermediate Frqency
PL : Preloading
PLL : Phase Lock Loop
PLS : Pulse
PRG : Programme
PS : Phase shift
PWM : Pulse Width Modulation
PWR : Power
P/R : Playback/Record
P/S : Pause/Still
PAL : Phase Alternation by Line

QVP : Quasi Vertical Sync

REC : Record
REC.SAF : Record Safety
REW : Rewind
RF : Radio Frequency
RC : Remote Control

S/H : Sample and Hold
SC : Sub Carrier
SIF : Sound Intermediate Frequency
SEP : Separator
SP : Standard Play
SRCH : Search
SRV : Servo
SW25Hz : Head Switching Pulse
SYNC : Synchronizing Signal
SYSCON : System Control

S/S/S : Slow/Still/stop
S.CTL : Syscon Contol
S.DI : Syscon Data In
S.DO : Syscon Data Out
S.EN : Syscon Enable
SRST : Syscon Reset
SCK : Syscon Enadle
SDA : Serial Data
SCL : Serial Clock
SMPS : Switching Mode Power Supply
SECAM : Sequential a Memoire

T.EN : Tuner Enable
T.CL : Tuner Clock
T.DA : Tuner Data
T.MUTE : Tuner Channel Mute
T.REEL : Take-up Reel Sensor
T.RESET : Timer Reset
TP : Test Point
TRK : Tracking

U/D : Up/Down
UL : Unloading
UPS : Unloading Play Still

VCL : VPS Clock
V-REF : Voltage Reference
V-SYNC : Vertical Sync
VCO : Voltage Control Oscillator
VCR : Video Cassette Recorder
VIF : Video Intermediate Freqency
VSS : Vertical Sync Separator
VHS : Video Home System
V.DA : VPS Data
VXO : Voltage Controlled Crystal Oscillator
VIDJ : Video Judge

W/C : White/Clip
W/D : White/Dark
W.T : Wake up Time

XPR : Express Recording

uP : Microprocessor

1-5. CLEANING AND LUBRICATION

1-5-1. CLEANING TAPE MECHANISM

Periodic cleaning is necessary to insure continued excellent performance of the tape mechanism. To clean the following parts use "Kim Wipes" and solvent.

1. Capstan shaft.
2. All idler wheels.
3. All tape guide posts.
4. Supply and take-up reels.
5. Impedance roller.
6. Pinch roller.
7. Idler belt.
8. Loading belt.
9. Loading motor pulley.
10. Loading pulley.

To clean video heads, full erase head, and audio/control(A/C) head use only head cleaning kit and solvent.

Note:
When cleaning video heads move the cleaning stick in the direction of head rotation. Wiping in a vertical motion may damage the heads.

1-5-2. LUBRICATION TAPE MECHANISM

The tape transport mechanism is properly lubricated at the factory. In normal use cycles, and with average environmental conditions,additional lubrication should not be required during the first year of operation.

Depending on use and environmental conditions, periodic lubrication may be required. When relubricating, remove old lubricant first, then sparingly apply new lubricant. (Excessive lubricant may be transferred to other assemblies causing multifunction).

Use grease on the following parts after 1,000 hours operation. (See exploded view for location.)

1. Between base pole (L) assembly and mecha chassis assembly.
2. Between level review cam and mecha chassis assembly.
3. Between base pole (R) assembly and mecha chassis assembly.
4. Between plate main side and mecha chassis assembly.
5. Between I.B slide assembly and plate main slide.
6. Between gear loading (L) and gear loading (R).
7. Between main gear, eject gear and worm.

Oil may be required for the following parts every, 1,000 hours operation. (See exploded view for location.)

1. Supply reel and take-up reel shafts.
2. Links of both loading arms.
3. Between shaft of tension arm and chassis.
4. Pressure roller arm.
5. Shart of load pulley.

Other parts which are not listed above do not require lubrication, except if a part is replaced. Use appropriate oil or grease as indicated on exploded view.

2. DISASSEMBLY

2-1. INSTRUMENT DISASSEMBLY

2-1-1.Top Cabinet Removal (Fig.1)

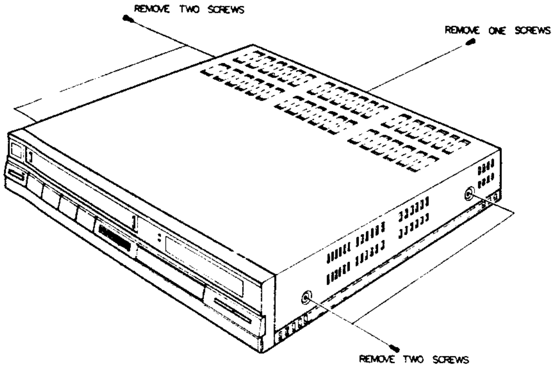

REMOVE TWO SCREWS
REMOVE ONE SCREWS
REMOVE TWO SCREWS

Fig.1

1.Remove five (5) screws located at the sides of the top cabinet.
2.Carefully lift the back of the top cabinet and slide it to the rear to remove.

2-1-2. Bottom Cover Removal (Fig.2)

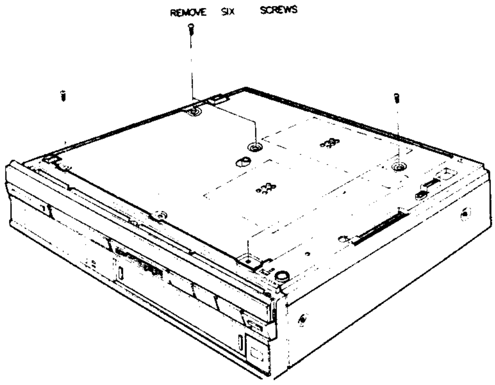

REMOVE SIX SCREWS

Fig.2

1.Remove six(6) screws holding the bottom cover.

2-1-3. Front Panel Removal(Fig.3)

1.Remove the top cabinet and the bottom cover. (See Figs1,2)
2.Remove three(3) screws from the top of the front panel.
3.Tilt the front panel forward to remove.

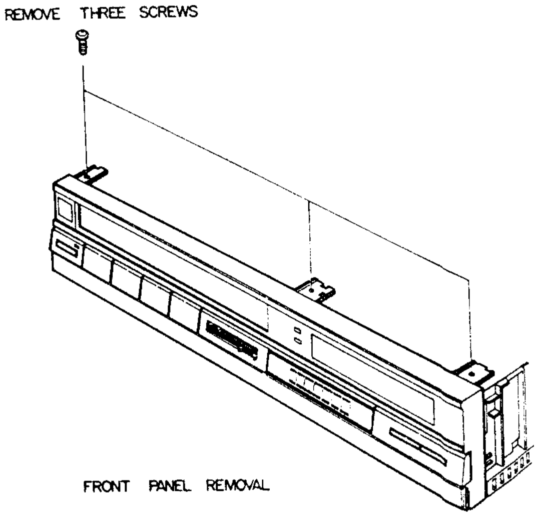

REMOVE THREE SCREWS
FRONT PANEL REMOVAL

Fig.3

2-1-4. Function Switch & Timer Input Key Circuit Board Removal(Fig.4)

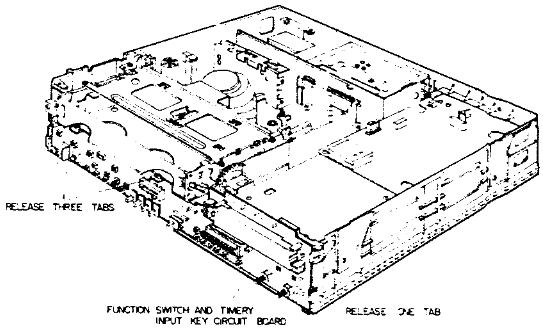

RELEASE THREE TABS
FUNCTION SWITCH AND TIMERY INPUT KEY CIRCUIT BOARD
RELEASE ONE TAB

Fig.4

1.Follow the procedure for removing the panels. (See Figs.1 to 3)
2.Remove three screws holding the function and timer input key circuit board.
3.Release four(4) taps on the circuit board.

2-1-5. Main- C (Hi-Fi) Circuit Board Removal (Fig.5)

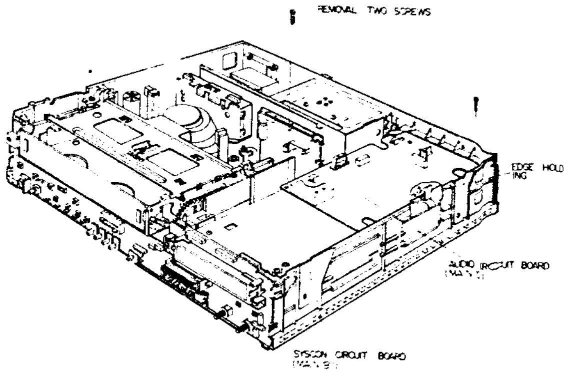

REMOVAL TWO SCREWS
EDGE HOLDING
AUDIO CIRCUIT BOARD (MAIN C)
SYSCON CIRCUIT BOARD (MAIN B)

Fig.5

1.Follow the procedure for removing the panels.
(See Figs.1 to 3)
2.Disconnect four connectors on the Main-C P.C.board.
3.Remove two screws on the Main -C P.C board.

2-1-6. Main -B Circuit Board Removal(Fig.6)

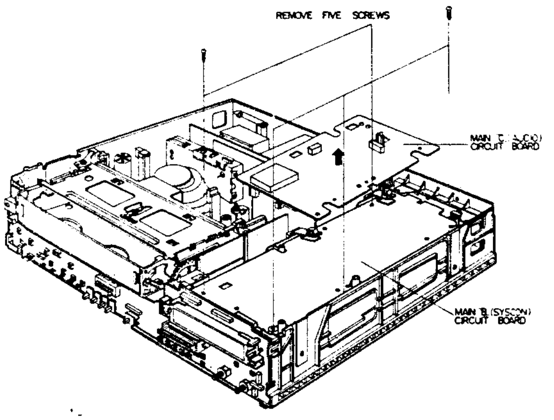

REMOVE FIVE SCREWS
MAIN C
CIRCUIT BOARD
MAIN B (SYSCON)
CIRCUIT BOARD

Fig.6

1.Follow the procedure for removing the panels.
(See Figs.1 to 3)
2.Follow the procedure for removing the Main-C P.C.board.
3.Remove five screws on the Main-B P.C board.
4.Pulloutthe board in the direction of the arrow.

2-1-7.Main-A (Y/C) Circuit Board Removal(Fig.7)

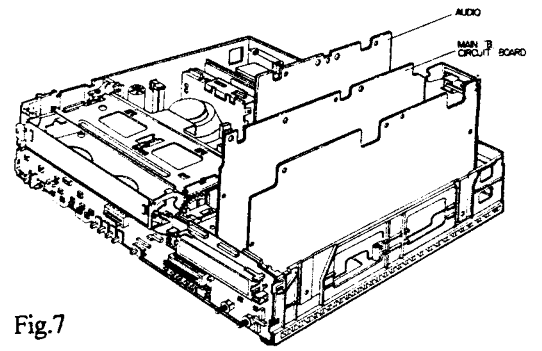

AUDIO
MAIN B
CIRCUIT BOARD

Fig.7

1.Follow the procedure for removing the panels.
(See Fig.1 to 3)
2.Follow the procedure for removing the Main-C & Main-B P.C.board(See Figs 5.6)
3.Remove two screws on the Main-A P.C. board.
4.Disconnect connectors between the Main-A circuit board and the other circuit boards.
5.Lift up the assembly in the direction of the arrow.

2-1-8. Regulator Circuit Board Removal(Fig.8)

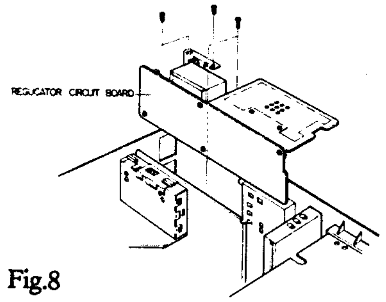

REMOVE FIVE SCREWS
REGULATOR CIRCUIT BOARD

Fig.8

1.Follow the procedure for removing the panels.
2.Remove five screws from the frame.
3.Disconnect nine connectors on the Regulator circuit board.
4.Remove the IC from the Lower Drum.
5.Taking care of the cable assemblies, lift the regulator circuit board upward to release.

2-1-9. Tuner Circuit Board Removal(Fig.9)

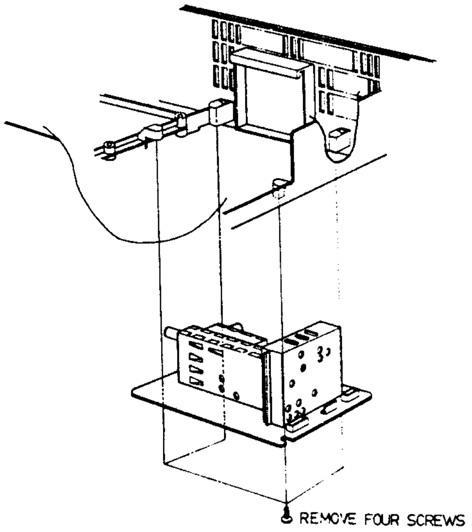

REMOVE FOUR SCREWS

Fig.9

1.Remove the top cabinet and Regulator circuit board.(See Figs 1,8)
2.Disconnect three connectors on the Tuner circuit board.
3.Remove four screws on the Tuner board.

2-1-10. PIP Assembly Circuit Board Removal (Fig.10)

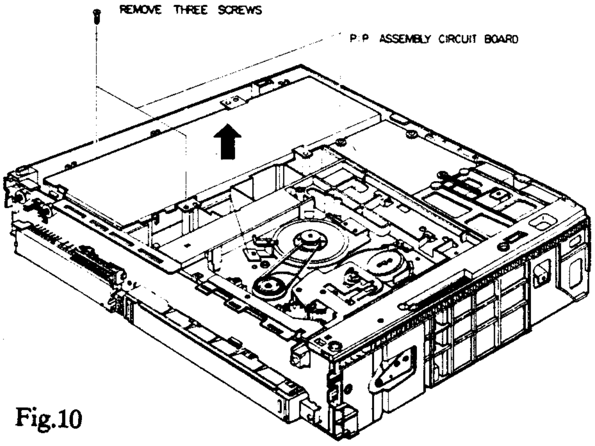
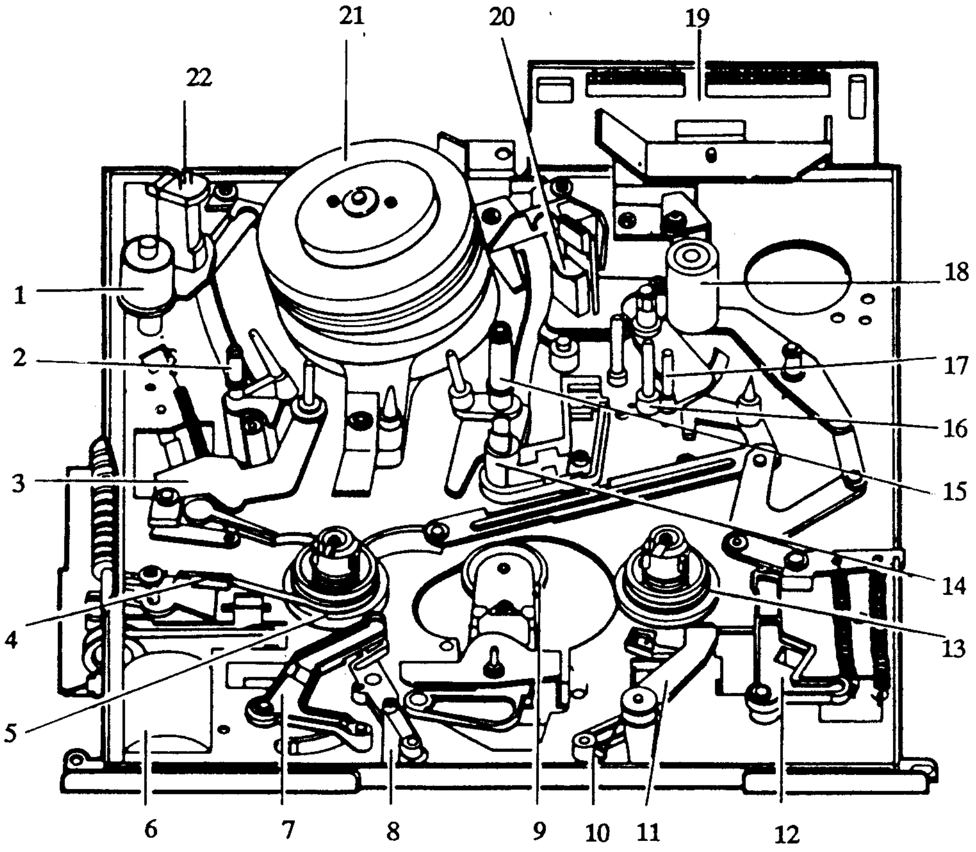

REMOVE THREE SCREWS
P.P ASSEMBLY CIRCUIT BOARD

Fig.10

1. Follow the Procedure for removing the panels.
(See Fig 1 to 3)
2. Remove three (3) screws on the PIP assembly circuit board.
3. Full out the PIP assembly circuit board in the direction of the arrow.

2-2.MECHANICAL DISASSEMBLY

Tape transport Mechanism Identification.
(TOP VIEW)



1 :	ROLLER SUPPLY
2 :	GUIDE ROLLER (L)
3 :	ARM TENSION ASS'Y
4 :	TENSION BAND ASS'Y
5 :	REEL DISK (S)
6 :	LOADING MOTOR ASS'Y
7 :	BRAKE SUB (L)
8 :	BRAKE MAIN (L)
9 :	IDLER CLUTCH ASS'Y
10:	BRAKE MAIN (R)
11 :	WEAK BRAKE (T) ASS'Y
12 :	BRAKE SUB (R)
13 :	REEL DISK (T)
14 :	HOLDER LED
15 :	GUIDE ROLLER (R)
16 :	CAPSTAN D.D MOTOR SHAFT
17 :	REVIEW ARM
18 :	PINCH ROLLER ASS'Y
19 :	DECK JOINT ASS'Y
20 :	ASS'Y A/C HEAD
21 :	DRUM ASSEMBLY
22 :	ASS'Y F/E HEAD

(BOTTOM VIEW)

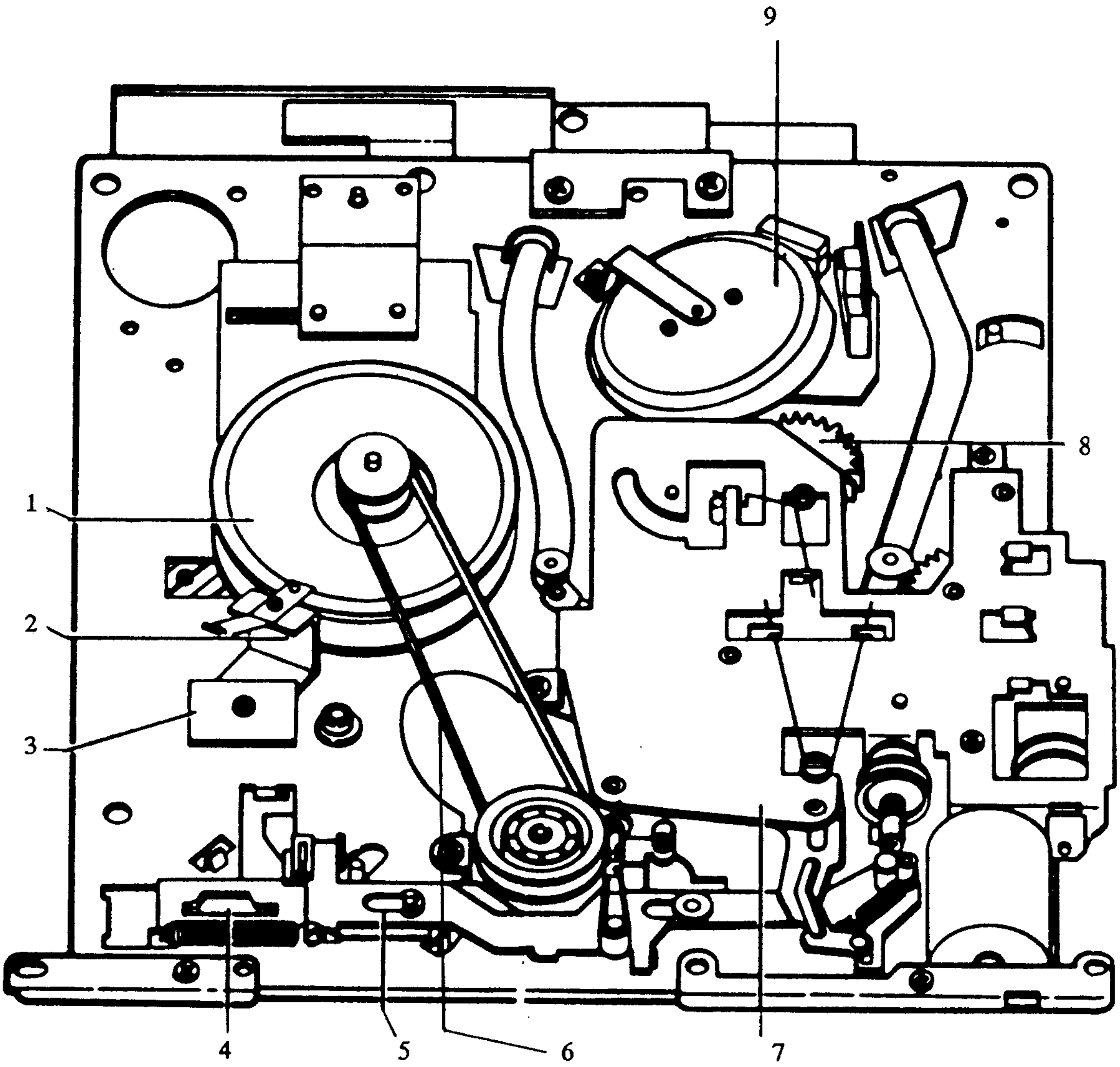


Fig 10

1: CAPSTAN D.D MOTOR
2: BRAKT PHOTOIN
3: REEL PCB
4: PLATE MAIN SLIDE
5: I.B SLIDE ASSEMBLY
6: ILDER BELT
7: LOADING MOTOR ASSEMBLY
8: ASSEMBLY GEAR LOADING (L)
9: MOTOR DRUM

2-2-1. Housing Assembly Removal

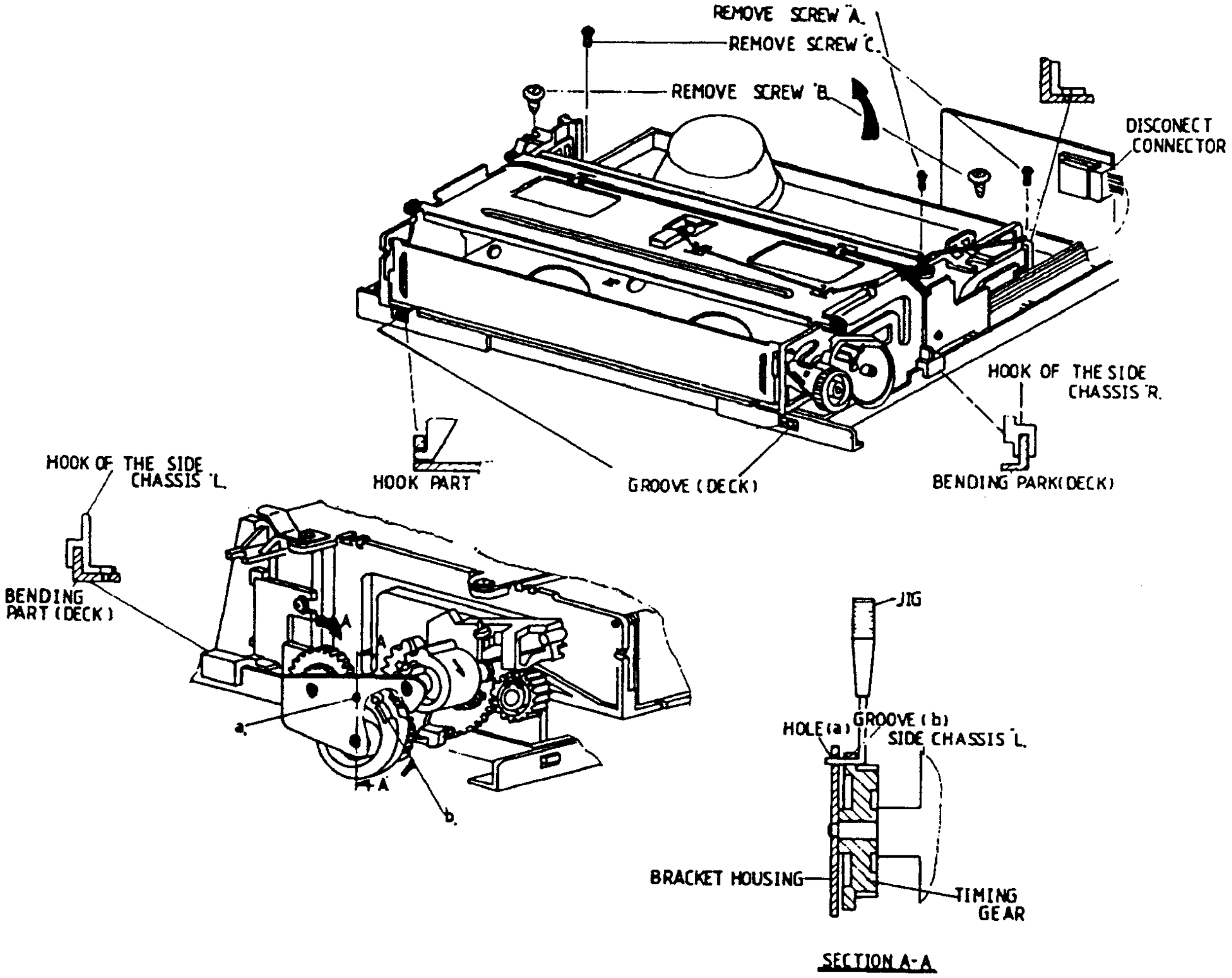

REMOVE SCREW 'A.
REMOVE SCREW 'C.
REMOVE SCREW 'B.
DISCONECT CONNECTOR
HOOK OF THE SIDE CHASSIS 'R.
BENDING PARK(DECK)
GROOVE (DECK)
HOOK PART
HOOK OF THE SIDE CHASSIS 'L.
BENDING PART (DECK)
A
A
a.
b.
A
JIG
HOLE(a)
GROOVE (b)
SIDE CHASSIS 'L.
BRACKET HOUSING
TIMING GEAR
SECTION A-A

Fig.12

1. Follow the procedure for removing the panels. (See Figs1 to 3)
2. Disconnect the connector(CN0204) from P C B Deck Joint board.
3. Remove the two screws A.
4. Remove the three screws B and C to relese ground.
5. Lift the rear of the housing assembly toward arrow mark.

Note:

* When reinstalling housing assembly to the deck, first insert the hook part of the housing ass'y into the groove of the deck.Second fit the hook of the side chassis(R)(L) to the bent part of the deck.

* Before reinstalling screws, check assembling point of the timing gear and arm gear, rotating the worm gear to the direction of arrow A.

A) Assembling point is the point that the hole of the gear holder plate corresponds to the groove of the timing gear as in Fig 12/A-A'.

B) If the assembly point is not correct .Ass'y will not operate smoothing or jam.

2-2-2. Housing Assembly Identification

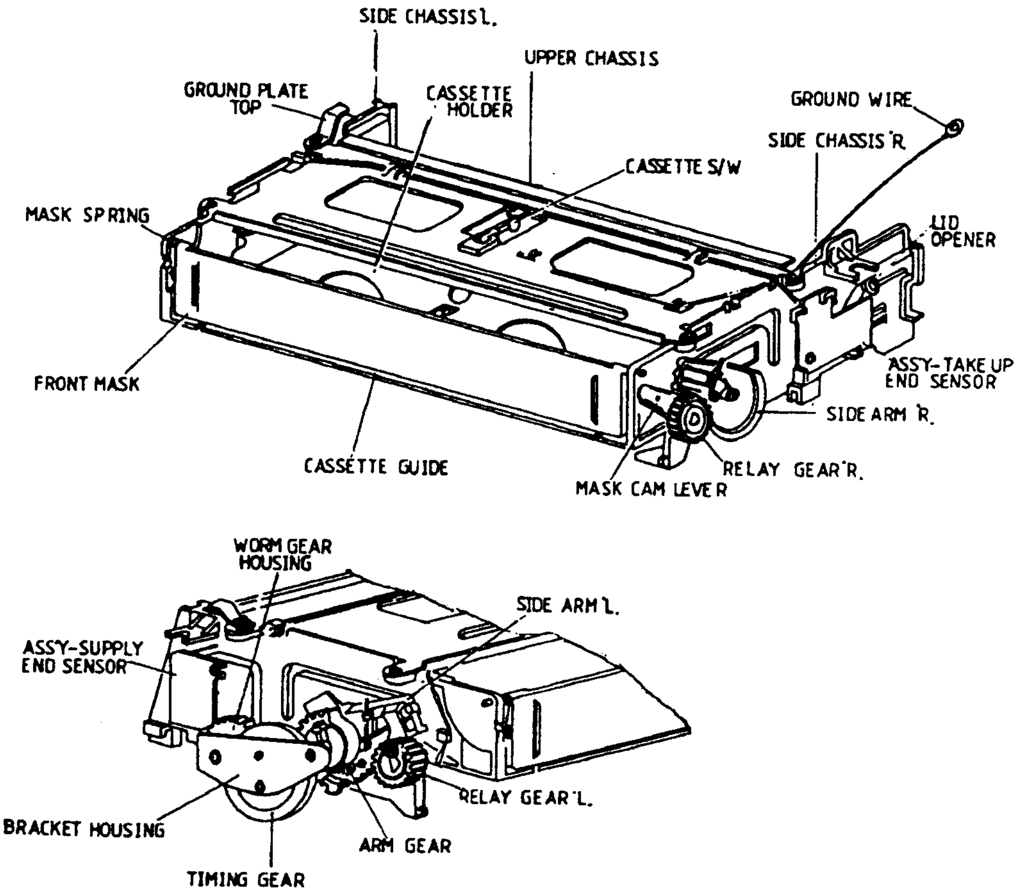

SIDE CHASSIS L.
UPPER CHASSIS
GROUND PLATE TOP
CASSETTE HOLDER
GROUND WIRE
SIDE CHASSIS'R
CASSETTE S/W
MASK SPRING
LID OPENER
FRONT MASK
ASSY-TAKE UP END SENSOR
SIDE ARM R.
CASSETTE GUIDE
RELAY GEAR'R.
MASK CAM LEVER
WORM GEAR HOUSING
SIDE ARM L.
ASSY-SUPPLY END SENSOR
RELAY GEAR'L.
BRACKET HOUSING
ARM GEAR
TIMING GEAR

Fig.13

2-2-3. Housing Assembly Disassemmbly

1. Front mask removal.

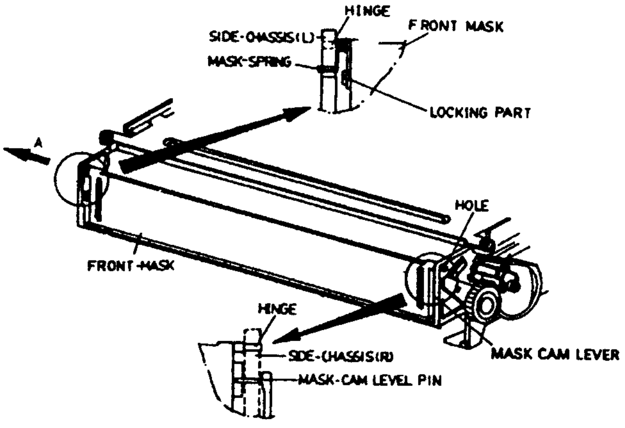

HINGE
SIDE-CHASSIS(L)
MASK-SPRING
FRONT MASK
LOCKING PART
A
HOLE
FRONT-MASK
HINGE
SIDE-CHASSIS(R)
MASK-CAM LEVEL PIN
MASK CAM LEVER

Fig.14

* Pull front mask in the direction of arrow A, release front mask hinge part from the hole in the side -chassis (R) and release hinge part in the hole in the side-chassis (L) release in the reverse direction.

2. Rec S/W Cassette S/W PCB Start Sensor Removal.
   Release REC S/W attached to the cassette guide.

Note:

* One end of the mask spring must be reinstalled in the lock part of the front mak and the other end must be reinstalled in the hook part of the side chassis(L).

* Upon reinstallation of the front mask slide, lever pin of the mask cam in the side-chassis(R) must be reinstalled. (Ref.Fig14).

* Cassette Switch Removal.

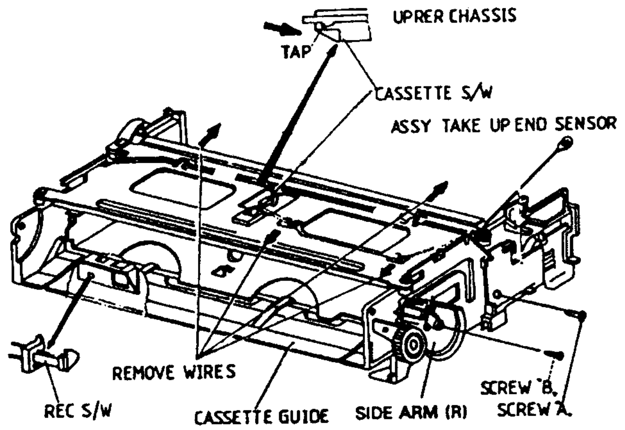

UPRER CHASSIS
TAP
CASSETTE S/W
ASSY TAKE UP END SENSOR
REMOVE WIRES
REC S/W
CASSETTE GUIDE
SIDE ARM (R)
SCREW "B"
SCREW "A"

Fig.15

1). Release the tap of the cassette S/W and remove. (Fig 15)
2). Remove the screw of the start sensor PCB removal. (Fig.15)
3). Remove the wires. (Fig.15)
4). After removing the lid opener spring, remove the lid opener pulling the locking part in the direction of the arrow. (Fig.17)

3. Supply End Sensor Ass'y Removal.

* After removing the screw at the side chassis(L), remove PCB end sensor.

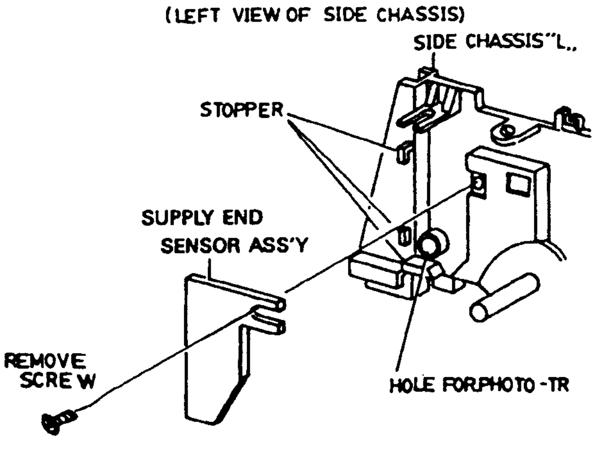

(LEFT VIEW OF SIDE CHASSIS)
SIDE CHASSIS "L"
STOPPER
SUPPLY END SENSOR ASS'Y
REMOVE SCREW
HOLE FOR PHOTO-TR

Fig.16

Note:
Be careful not to demage the TR and Photo TR attached to the supply End sensor Ass'y.

4. Lid Opener Removal

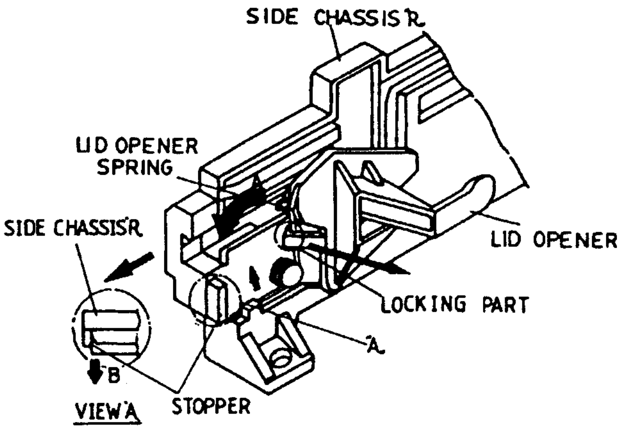

SIDE CHASSIS R
LID OPENER SPRING
SIDE CHASSIS R
LID OPENER
LOCKING PART
A
B
VIEW A
STOPPER

Fig.17

* Remove the lid opener spring from the locking part of the lid opener.
* Pull the lid opener in the direction A. and release the locking part pulling it in the direction B (Refer to view A)

5. Timing Gear, Side Arm (L) Assy&Worm Gear Housing Removal

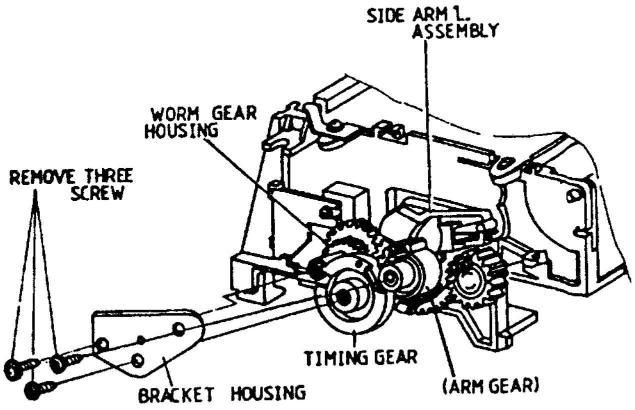

SIDE ARM L. ASSEMBLY
WORM GEAR HOUSING
REMOVE THREE SCREW
TIMING GEAR
BRACKET HOUSING
(ARM GEAR)

fig.18

1). Remove the three screws from the housing bracket. (Fig.18) (Remove the ground wire)
2). Remove the timing gear and the side arm(L) assembly and the worm gear housing.

Note:
Upon reinstallation, check to see if the shaft (R) and (L) of the cassette holder is inserted at the home position of side arm(R) and (L).

6. Side Arm (R) and (L) Reinstallation

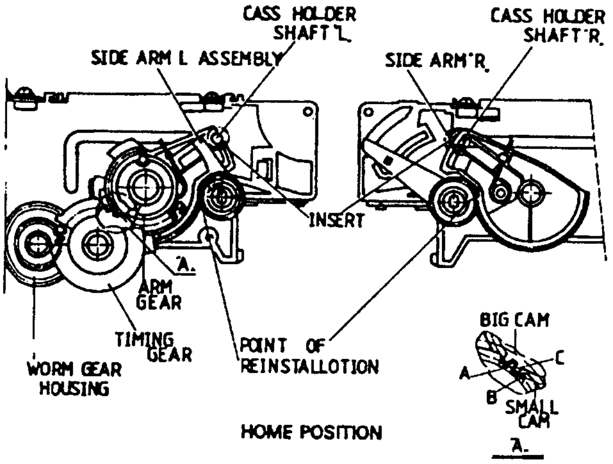

CASS HOLDER SHAFT'L
CASS HOLDER SHAFT'R
SIDE ARM L ASSEMBLY
SIDE ARM'R
INSERT
A.
ARM GEAR
BIG CAM
TIMING GEAR
POINT OF REINSTALLOTION
C
A
B
SMALL CAM
WORM GEAR HOUSING
HOME POSITION
A.

Fig.19

7. Upper Chassis Removal.

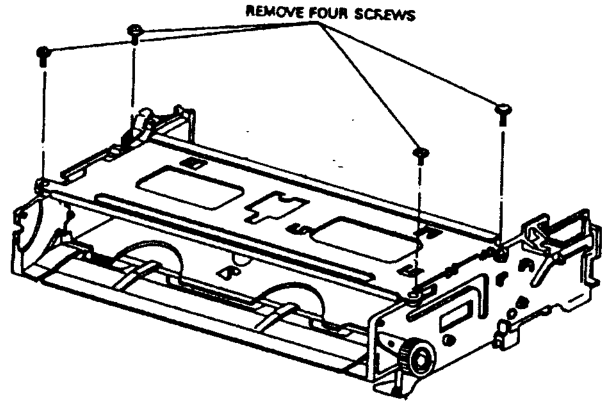

REMOVE FOUR SCREWS

Fig.20

After removing four screws, pull the upper chassis upward to remove. (Fig. 20)

1). Release the eject spring .
2). Remove the arm gear.
3). Release the tension spring L.

8. Side Arm(L) Assembly Removal.

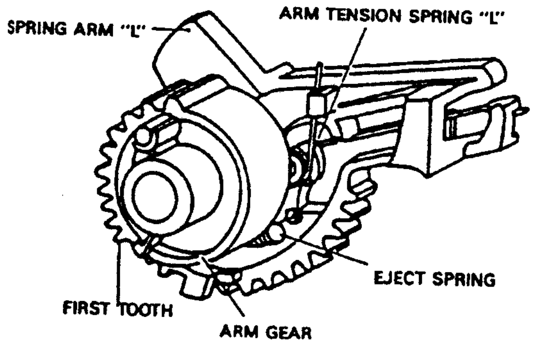

SPRING ARM "L"
ARM TENSION SPRING "L"
EJECT SPRING
FIRST TOOTH
ARM GEAR

Fig.21

2-2-4.. HOW TO ASSEMBLE CASSETTE HOUSING

2-2-4-1. Without Jig for Assembling

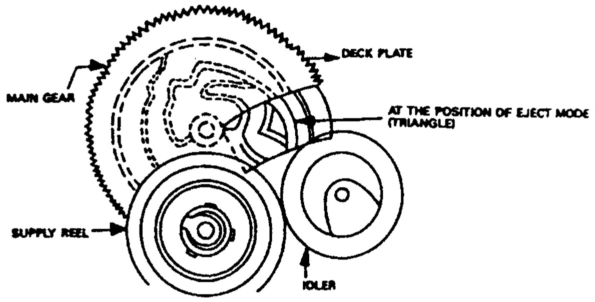

DECK PLATE
MAIN GEAR
AT THE POSITION OF EJECT MODE (TRIANGLE)
SUPPLY REEL
IDLER

Fig.22

1. Before assembling the cassette housing, eject loading gear completely.
2.. Make certain the main gear of the loading motor is at the eject position as Fig.22.
3. As shown Fig .23, rotate the worm gear housing of cassette housing in the direction of the arrow, until the rotation comes to stop.

* Check the movement of the front loading mechanism, it should move freely from the eject to the cassette load position. If not the worm gear housing is in the wrong position.

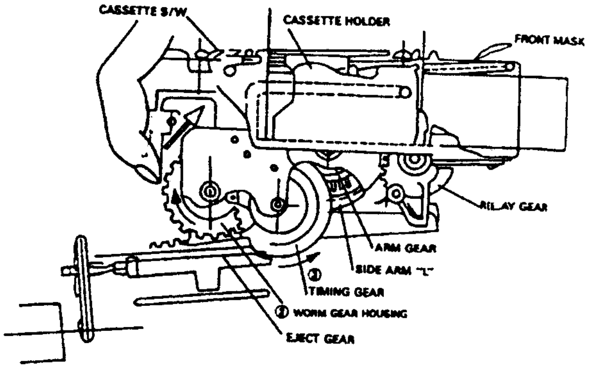

CASSETTE S/W
CASSETTE HOLDER
FRONT MASK
RELAY GEAR
ARM GEAR
SIDE ARM "L"
③
TIMING GEAR
② WORM GEAR HOUSING
EJECT GEAR

Fig 23

If the cassette tape does not come out in the eject mode, assembling of gears(2) and (3) is not correct , reassemble the cassette housing.

2-2-4-2. With Jig for Assembling

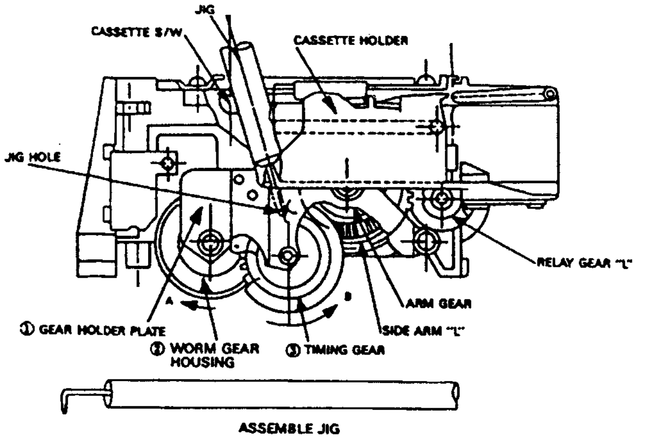

JIG
CASSETTE S/W
CASSETTE HOLDER
JIG HOLE
RELAY GEAR "L"
A
B
ARM GEAR
① GEAR HOLDER PLATE
SIDE ARM "L"
② WORM GEAR HOUSING
③ TIMING GEAR
ASSEMBLE JIG

Fig.24

As shown in Fig.24, rotate the timing gear (3) and worm gear housing (2) to the direction of A and B, Aligned the hole of gear holder plate (1) and timing gear (3) and then insert the assembly jig in the hole to set-up the deck.

2-2-5. Mechanical Chassis Assembly Removal.

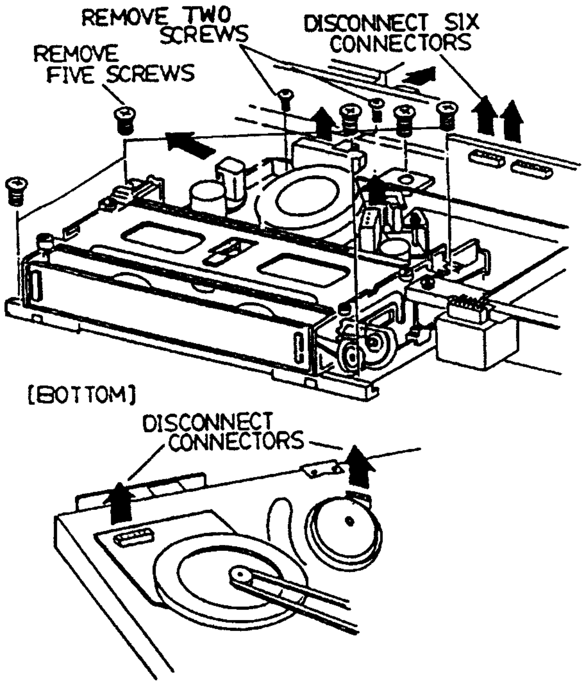

REMOVE TWO SCREWS
DISCONNECT SIX CONNECTORS
REMOVE FIVE SCREWS
[BOTTOM]
DISCONNECT CONNECTORS

Fig.25

1. Remove the Panels. (See Fig. 1 to 3)
2. Disconnect the six connectors.
   (four on top, two on bottom)
3. Remove the two screws and pull the video head pre-amp ass'y assembly upward to remove.
4. Remove a ground straps from bottom.
5. Remove the five screws and pull the mechanism chassis assembly upward to remove

2-2-6. Video Head (Upper Drum) Removal and Drum Motor Assembly Removal.

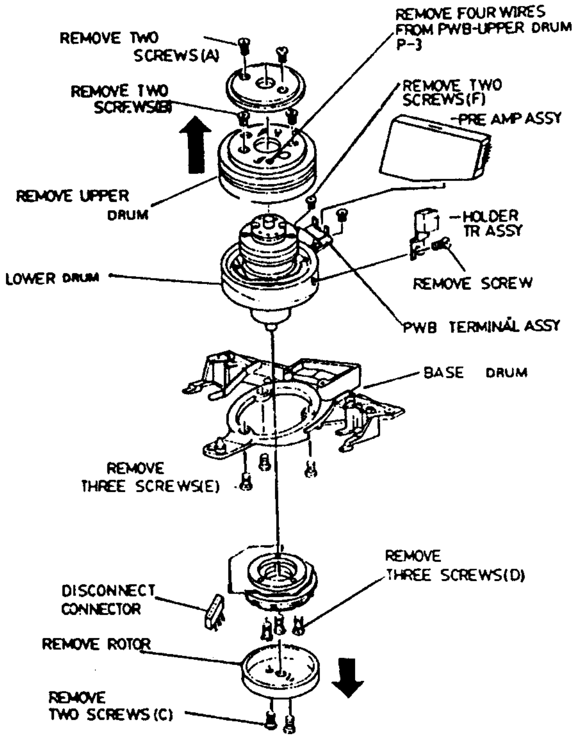

REMOVE FOUR WIRES FROM PWB-UPPER DRUM P-3
REMOVE TWO SCREWS(A)
REMOVE TWO SCREWS(B)
REMOVE TWO SCREWS(F)
-PRE AMP ASSY
REMOVE UPPER DRUM
-HOLDER TR ASSY
LOWER DRUM
REMOVE SCREW
PWB TERMINAL ASSY
BASE DRUM
REMOVE THREE SCREWS(E)
REMOVE THREE SCREWS(D)
DISCONNECT CONNECTOR
REMOVE ROTOR
REMOVE TWO SCREWS (C)

Fig.26

Note:

Take extreme care when removing the upper drum. Do not touch the video head tips (located in the upper drum) during servicing.

* Follow the procedure for removing

1. Remove the top cabinet. (See Fig. 1)
2. Remove the bottom cover. (See Fig. 2)
3. Remove two (A) screws holding the upper drum cover.
4. Remove four wires soldered to PWB-Upper Drum P-3.
   Note: Upon reinstallation, connect four wires to wires of the same color which are soldered PWB-upper drum P-3.
5. Remove two(B) screws on the upper drum.
6. Lift up the upper drum in the direction of the arrow.
7. Remove video head pre-Amp ass'y two screws.
8. Remove two(C) screws holding the fly wheel.
   Note:Before removing flywheel mark position.
9. Disconnect connector (CN004) from the drum motor.
10. Remove three screws(D) holding the drum motor.

* When it is necessary to remove lower drum, remove three screws (E) and lift up the lower drum assembly in the direction of the arrow.

Note:

Upon reinstallation, alternately tighten the two screws holding upper drum and perform the following adjustments.

* Tracking preset adjustment.

* A/C head horizontal position adjustment (X-Point Adj).

2-2-7. Full Erase(F/E) Head & Supply Roller Removal

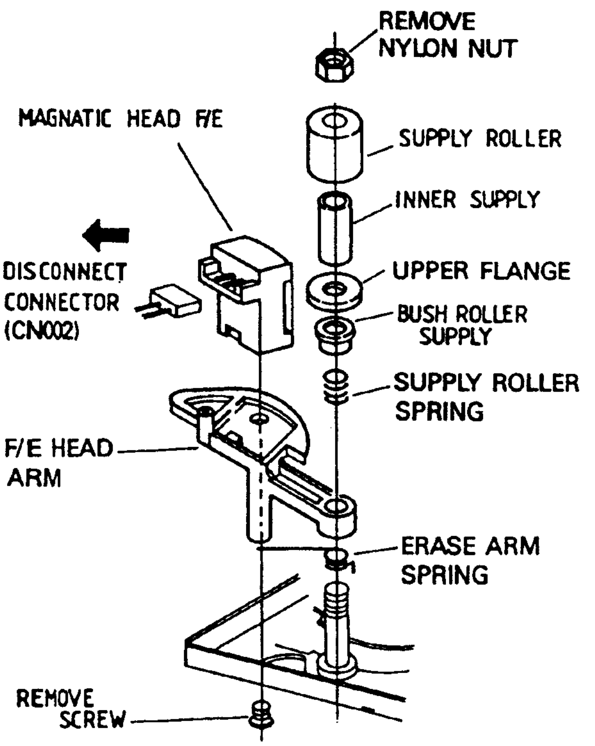

REMOVE NYLON NUT
MAGNATIC HEAD F/E
SUPPLY ROLLER
INNER SUPPLY
DISCONNECT CONNECTOR (CN002)
UPPER FLANGE
BUSH ROLLER SUPPLY
SUPPLY ROLLER SPRING
F/E HEAD ARM
ERASE ARM SPRING
REMOVE SCREW

Fig.27

1. Remove the top cabinet.(See Fig.1)
2. Disconnect the connector (CN002)from the F/E head.
3. Remove the nut at the top of the supply roller and remove the supply roller,inner supply, upper flange, supply roller bush.
4. Remove the supply roller spring.
5. Pull the F/E head arm upward to remove.
6. Remove the screw holding the F/E head.
7. Pull the erase head arm spring from the hole upward and remove.
8. After replacing or reinstalling the F/E head, clean each tape contact surface of the F/E head and supply roller.

Note;
Upon reinstallation, turn the nylon nut firmly (fix type).

2-2-8. Audio / Control (A/C) Head Removal

1. Remove the top cabinet. (See Fig. 1)
2. Disconnect the connector (CN005) from the A/C head.
3. Remove the hex nut holding the A/C head holder and remove the plain washer.
4. Pull the A/C head assembly upward to remove.
5. Remove screw (A) and spring (A).
6. Remove screw (B) and remove A/C head assembly.
7. After replacing or reinstalling the A/C head assembly holbor, clean the tape contact surface of the head.

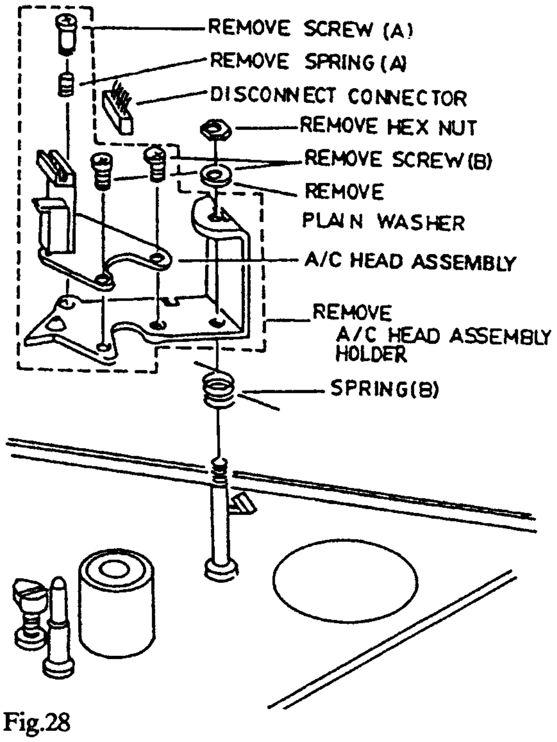

REMOVE SCREW (A)
REMOVE SPRING (A)
DISCONNECT CONNECTOR
REMOVE HEX NUT
REMOVE SCREW (B)
REMOVE PLAIN WASHER
A/C HEAD ASSEMBLY
REMOVE A/C HEAD ASSEMBLY HOLDER
SPRING(B)

Fig.28

Note:
Upon reinstallation, hook the spring between A/C head base and mechanism chassis.
After installing the A/C head asslembly holder, perform the following adjustments.

1) A/C Head Height, Tilt and Azimuth Adjustments.
2) A/C Head Horizontal Position Adjustment (X-Point).
3) Audio Playback Gain Adjustment.
4) Audio Bias Level Adjustment.

* Audio head height must be performed before A/C head horizontal position adjustment is performed.
* If audio head height is adjust, the A/C head horizontal position must be readjusted.
* After completion of the A/C head position adjustment, the A/C head base must be positioned at apporximately the center of the X-Point nut adjust.

2-2-9. Loading Motor Assembly Removal

1. Remove the top cabinet. (See Fig. 1)
2. Remove the bottom cover. (See Fig. 2)
3 Remove the mechanism chassis assembly. (See Fig. 25)
4. Remove the housing assembly. (See Fig. 12)
5. Remove the slit washer.
6. Remove the two connectors.
7. Release the spring (Loading pin side first).
8. Remove the three screws and pull the loading motor assembly upward in the direction of the arrow (A).

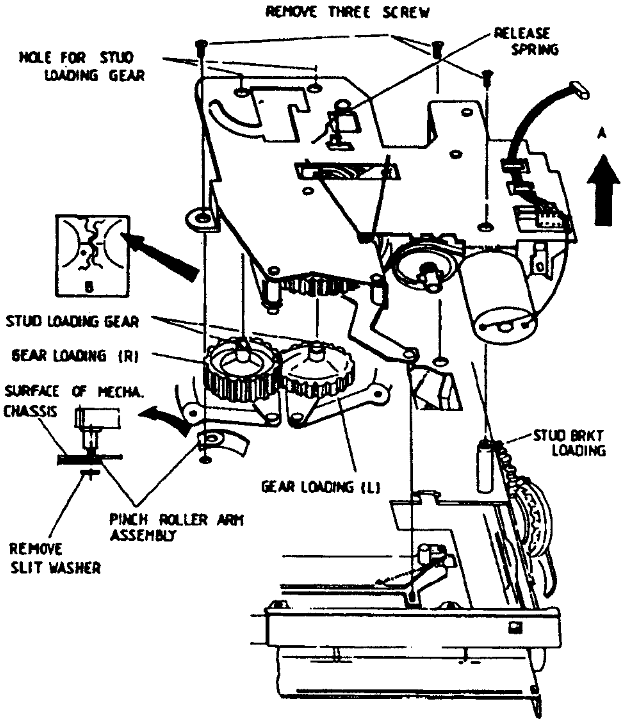

REMOVE THREE SCREW
RELEASE SPRING
HOLE FOR STUD LOADING GEAR
A
B
STUD LOADING GEAR
GEAR LOADING (R)
SURFACE OF MECHA. CHASSIS
STUD BRKT LOADING
GEAR LOADING (L)
PINCH ROLLER ARM ASSEMBLY
REMOVE SLIT WASHER

Fig.29

Note
Upon reinstallation, be sure the marks on the gear loading (L), (R) are positioned in line (See B).

2-2-10. Tension Arm Assembly, Tension Band Assembly Removal

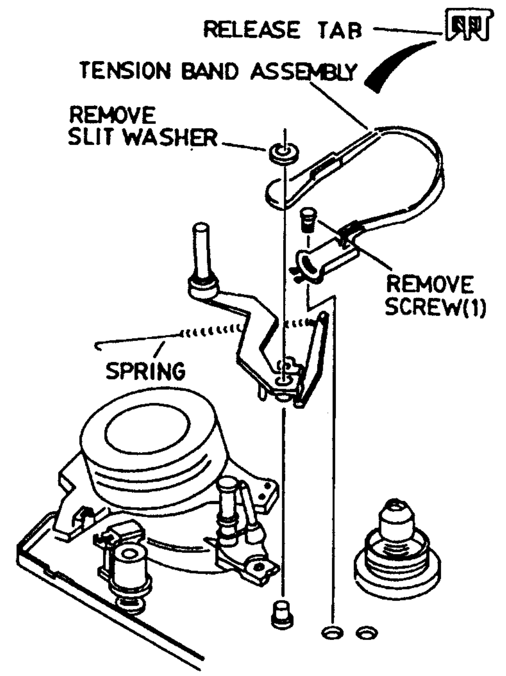

RELEASE TAB
TENSION BAND ASSEMBLY
REMOVE SLIT WASHER
REMOVE SCREW(1)
SPRING

Fig.30

1. Remove the screw holding the tension band assembly.
2. Remove the spring hooked on the chassis.
3. Remove the slit washers and pull the arm tension assembly upward.
4. Release the tab holding the tension band assembly.

Note
Confirm back tension after reinstalling.

2-2-11. Brake Sub (R) Assembly and Brake Sub (L) Assembly Removal

1. Follow the procedures for removing the panels. (See Figs. 1 to 3)
2. Remove the housing assembly. (See Fig. 12)
3. Remove the two slit washers and release the sub brake (R) spring.
4. Release the tabs holding the brake Sub (R) assembly and brake sub (L) assembly.

Note
Take care when removing spring.

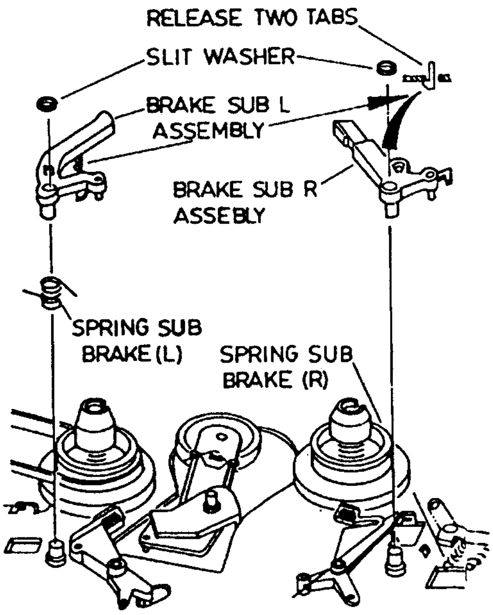

RELEASE TWO TABS
SLIT WASHER
BRAKE SUB L ASSEMBLY
BRAKE SUB R ASSEBLY
SPRING SUB BRAKE (L)
SPRING SUB BRAKE (R)

Fig.31

2-2-12. Brake Main (L) Assembly and Brake Main (R) Assembly Removal

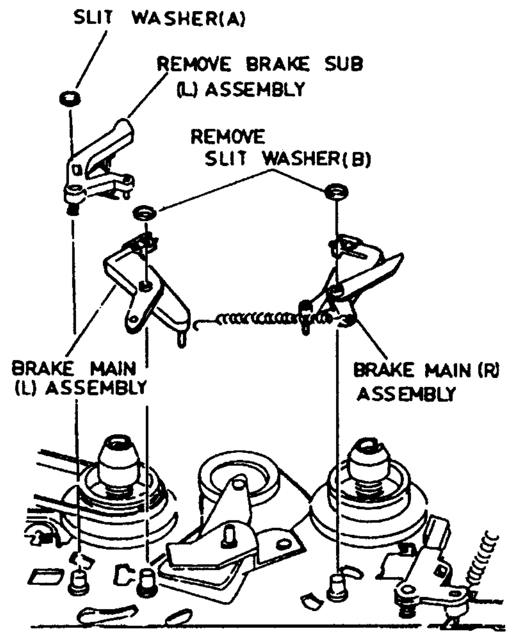

SLIT WASHER(A)
REMOVE BRAKE SUB (L) ASSEMBLY
REMOVE SLIT WASHER(B)
BRAKE MAIN (L) ASSEMBLY
BRAKE MAIN (R) ASSEMBLY

Fig.32

1. Follow the procedures for removing the panels. (See Figs. 1 to 3)
2. Remove the housing assembly. (See Fig. 12)
3. Remove the brake sub (L) assembly. (See Fig. 28)
4. Remove the two slit washers.
5. Release the spring hooks on the brake main assemblies.

2-2-13. D.D Capstan Motor Removal

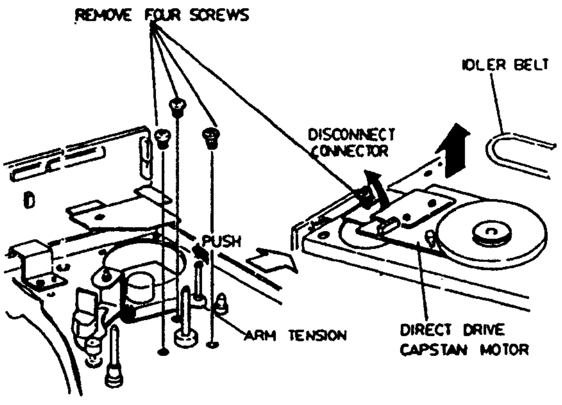

REMOVE FOUR SCREWS
IDLER BELT
DISCONNECT CONNECTOR
D
PUSH
ARM TENSION
DIRECT DRIVE CAPSTAN MOTOR

Fig.33

1. Remove the top cabinet.(See Fig. 1)
2. Remove the bottom cover. (See Fig. 2)
3. Release the idler belt and disconnect connector from D.D capstan motor.
4. Remove four screws.
5. Push the review arm assembly, remove four screws.

2-2-14. Assembly Gear Loading (L)(R) Removal

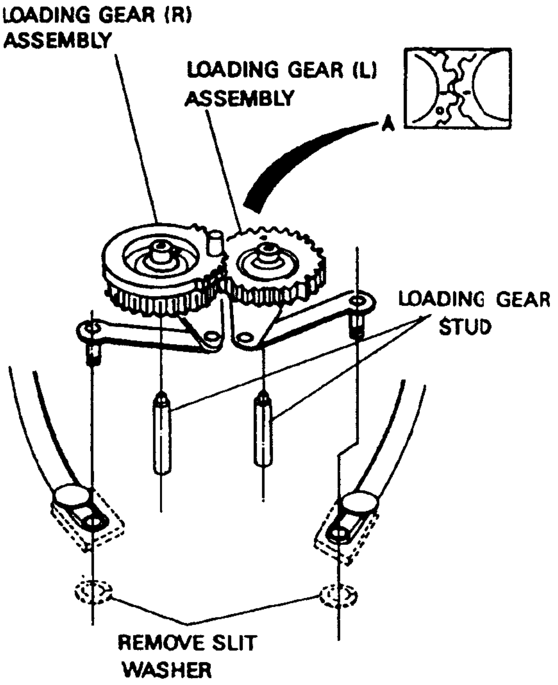

LOADING GEAR (R) ASSEMBLY
LOADING GEAR (L) ASSEMBLY
A
LOADING GEAR STUD
REMOVE SLIT WASHER

Fig.34

1. Follow the procedures for removing the panels. (See Figs. 1 to 3)
2. Remove mechanism chassis assembly. (See Fig. 22)
3. Remove the housing assembly. (See Fig. 12)
4. Remove the loading motor assembly. (See Fig. 29)
5. Remove the slit washer holding on the loading arm assembly.

Note

Place gears in the unloaded position upon reinstallation, be sure the marks on the gear loading (L)(R) are positioned in line. (See. A)

2-2-15. Guide Roller Assembly Removal

1. Remove the top and the bottom cover. (See Figs. 1,2)
2. Loosen each set screw at the pole base assembly.
3. Turn the guide roller assemblies counterclockwise.
4. After replacing or reinstalling the guide roller assemblies, clean each tape contact surface of the guide roller assemblies.

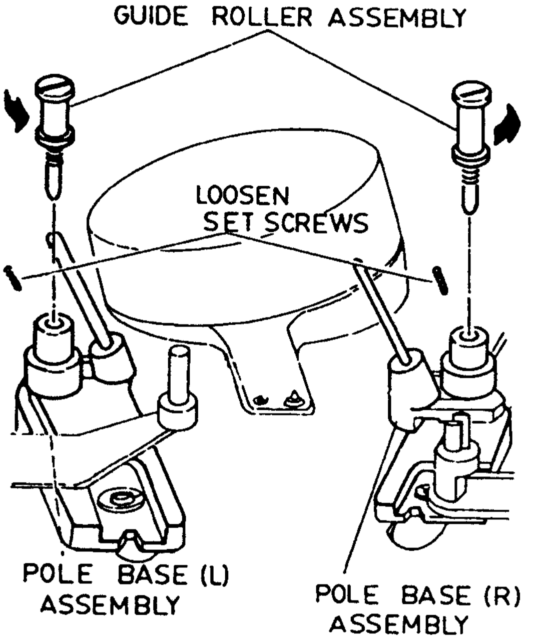

GUIDE ROLLER ASSEMBLY
LOOSEN
SET SCREWS
POLE BASE (L)
ASSEMBLY
POLE BASE (R)
ASSEMBLY

Fig.35

Note

Upon reinstallation, perform the guide roller assemblies adjustment.

2-2-16. Reel Disk (S) Assembly Removal

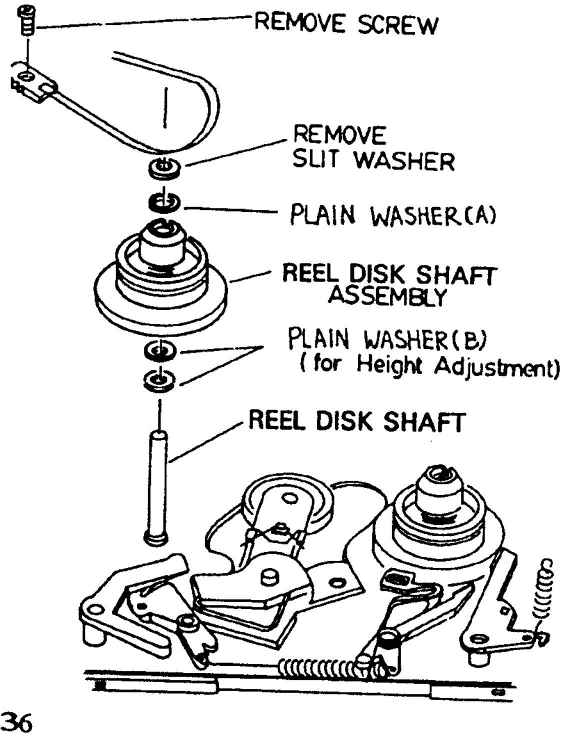

REMOVE SCREW
REMOVE
SLIT WASHER
PLAIN WASHER(A)
REEL DISK SHAFT
ASSEMBLY
PLAIN WASHER(B)
(for Height Adjustment)
REEL DISK SHAFT

Fig.36

1. Remove the top and bottom cover. (See Figs. 1,2)
2. Remove the housing assembly. (See Fig. 12)
3. Remove the screw holding the tension band assembly.
4. Revmoe the slit washer from the reel disk shaft.
5. Remove the plain washer (A).

Note

Do not remove the plain washer (B) under the reel disk (S) assembly.

2-2-17. Reel Disk (T) Assembly Removal.

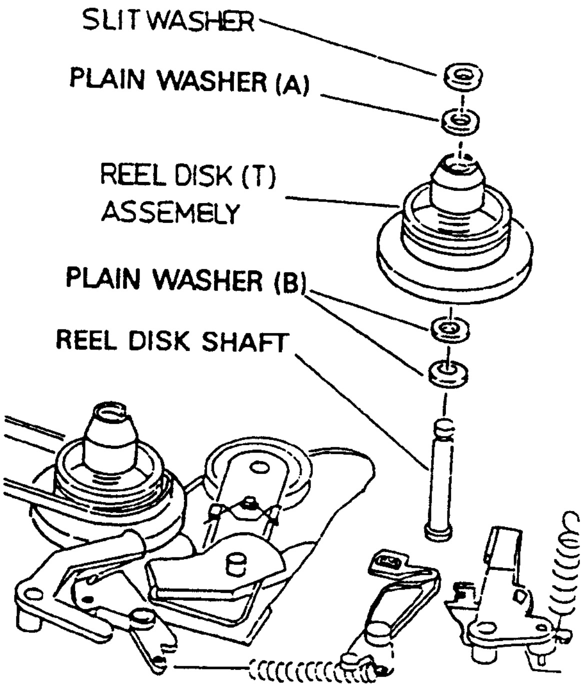

SLIT WASHER
PLAIN WASHER (A)
REEL DISK (T)
ASSEMBLY
PLAIN WASHER (B)
REEL DISK SHAFT

Fig.37

1. Remove the top and bottom cover. (See Figs. 1,2)
2. Remove the housing assembly. (See Fig. 12)
3. Remove the slit washer from the reel disk shaft.
4. Remove the plain washer (A) and pull the reel disk (T) assembly upward.

Note:

Do not remove the washer plain(B) under the reel disk (T) assembly.

2-2-18. Pinch.Roller Assembly and Pinch Roller Arm Assembly Removal.

1. Follow the procedures for removing the panels. (See Fig. 1 to 2)
2. Remove the housing assembly. (See Fig.12)
3. Remove the screw holding the pinch roller assembly.
4. Remove the ring-E.
5. Remove the slit washer(A) and slit washer(B).
6. Release the spring (A) and the spring(B).

7. Pull the pinch roller arm assembly upward (arrow mark direction) to remove.

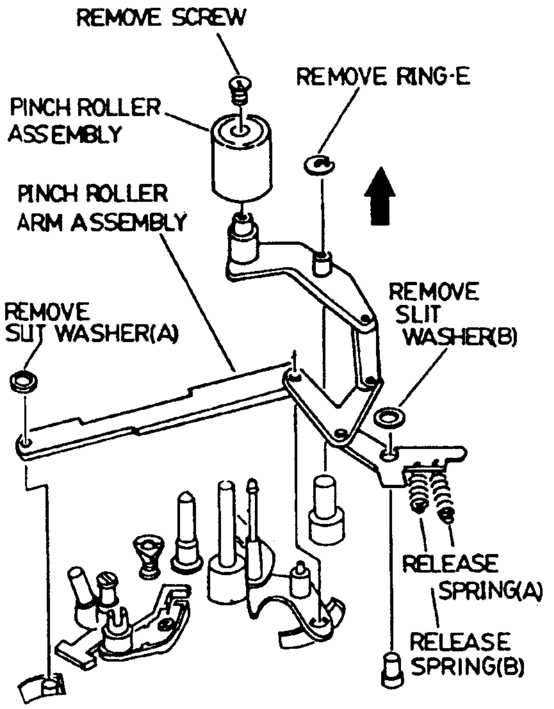

REMOVE SCREW
REMOVE RING-E
PINCH ROLLER ASSEMBLY
PINCH ROLLER ARM ASSEMBLY
REMOVE SLIT WASHER(A)
REMOVE SLIT WASHER(B)
RELEASE SPRING(A)
RELEASE SPRING(B)

Fig.38

2-2-19.Assembly Holder LED Removal.

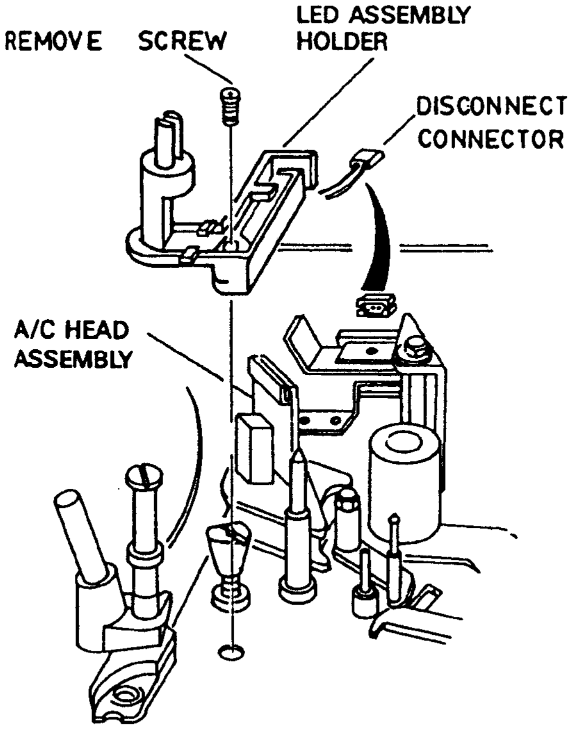

REMOVE SCREW
LED ASSEMBLY HOLDER
DISCONNECT CONNECTOR
A/C HEAD ASSEMBLY

Fig.39

1. Follow the procedures for removing the panels. (See Fig.1)
2. Remove the housing assembly. (See Fig.12)
3. Disconnect the connector.
4. Remove screw and the LED assembly holder upward to remove.

2-2-20. Review Arm Assembly Removal.

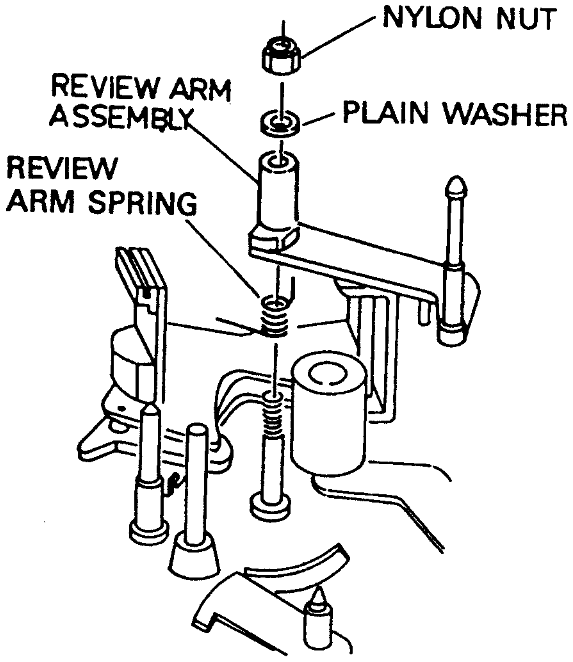

NYLON NUT
REVIEW ARM ASSEMBLY
PLAIN WASHER
REVIEW ARM SPRING

Fig.40

1. Remove the top cabinet.(See Fig. 1)
2. Remove nylon nut and plain washer.
3. Release review arm spring.
4. Pull the review arm assembly upward to remove.

Note:
After replacing or reinstalling the review arm assembly clean the tape contact surfase of the review arm assembly and perform the review arm assembly adjustment.

2-2-21. Drum assembly Removal.

1. Follow the procedures for removing the panels. (See Figs. 1 to 2)
2. Remove the video head pre Amp assembly.(Fig.46)
3. Disconnect the two connectors(CN004, CN101).
4. Remove the three screws.

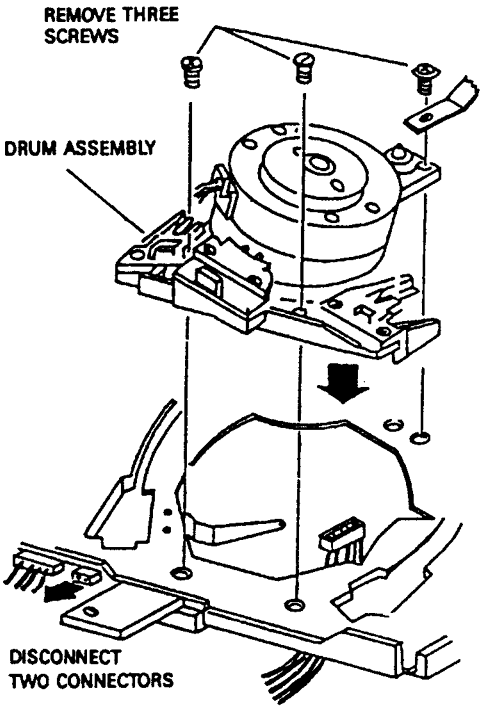

REMOVE THREE SCREWS
DRUM ASSEMBLY
DISCONNECT TWO CONNECTORS

Fig.41

2-2-22. Assembly Photo Interrupter Removal.

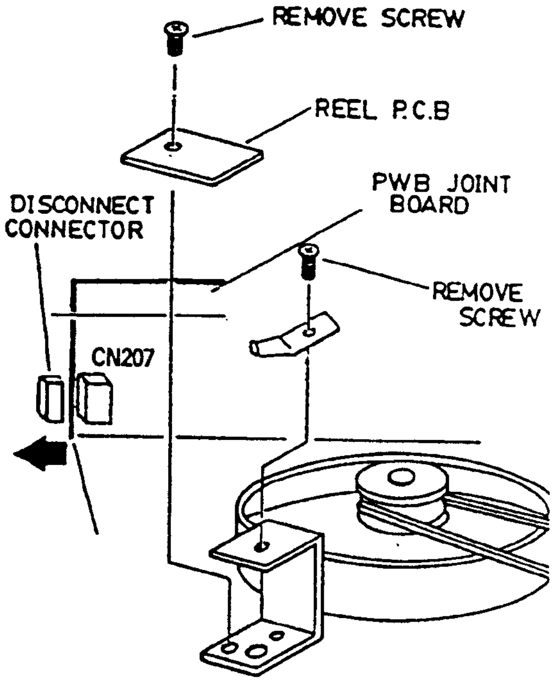

REMOVE SCREW
REEL P.C.B
PWB JOINT BOARD
DISCONNECT CONNECTOR
REMOVE SCREW
CN207

Fig.42

1. Remove the top and bottom cover. (See Figs. 1, 2)
2. Disconnect the connector (CN207).
3. Remove the screw.

2-2-23. I. B Slide Assembly and Plate Main Slide Removal.

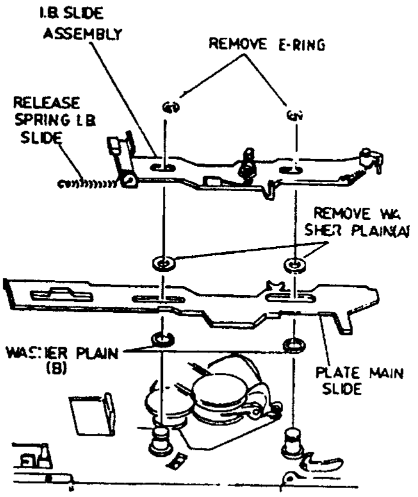

I.B SLIDE ASSEMBLY
REMOVE E-RING
RELEASE SPRING I.B SLIDE
REMOVE WASHER PLAIN(A)
WASHER PLAIN (B)
PLATE MAIN SLIDE

Fig.43

1. Follow the procedures for removing the panels. (See Figs. 1 to 3)
2. Remove the mechanism chassis assembly. (See Fig.25)
3. Remove the loading motor assembly. (See Fig.29)
4. Remove two ring-E washers and release spring I.B slide upward to remove.

Note:
Do not remove the plain washer (B) under the plate main slide.
* I . B :Idler Break

2-2-24. Idler Clutch Assembly Removal.

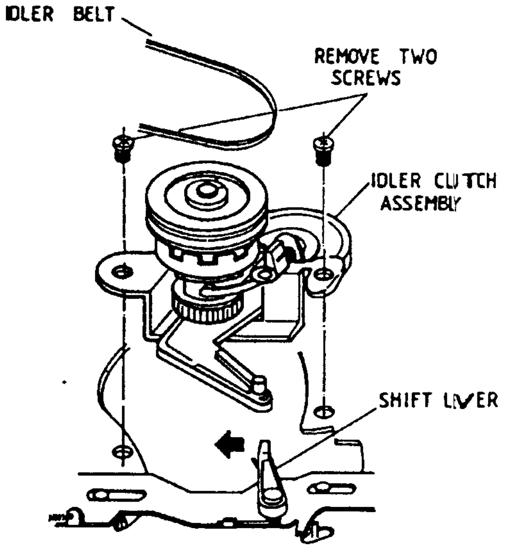

IDLER BELT
REMOVE TWO SCREWS
IDLER CLUTCH ASSEMBLY
SHIFT LEVER

Fig.44

1. Remove the bottom cover. (See Fig.2)
2. Release the idler belt and remove the two screws.
3. Pull the idler clutch assembly upward to remove, at the same time push the shift lever about 5-10 mm.

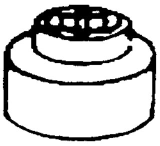
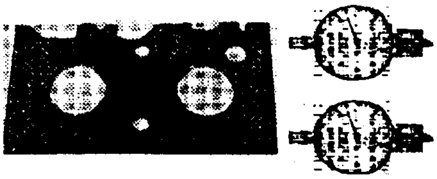
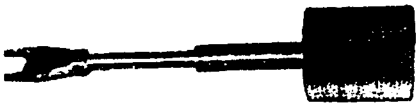
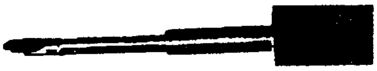
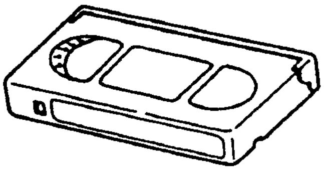
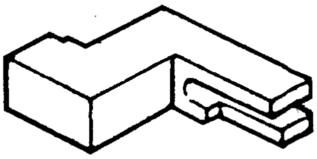
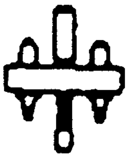
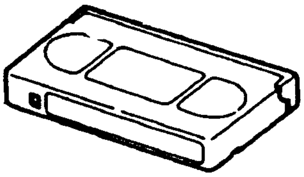
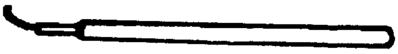
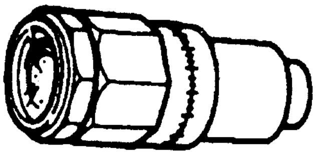
3.MECHANICAL ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENT TOOLS

JIG ITEM	CODE NO	SPECIFICATION	DESCRIPTION		SKETCH NO
SERVICE JIG KIT	SSJ-K2001A	COMMON	Refer to attach 1.		
TORQUE HEAD GAUGE	SSJ-1001B	LONG	This gauge is used to check and adjust the torque of take up/supply reel.		A
MASTER PLANE & REEL DISK HEIGHT JIG	SSJ-1002B	G-7/8 CHASSIS	This jig is used to check the height difference between reel disk and deck plate.		B
ADJUSTING DRIVER A	SSJ-1003A	COMMON	This jig is used when replacing the cam adjust and guide roller.		C
B	SSJ-1003B	COMMON	This jig is used when replacing the A/C head, supply roller, tape guide and arm tension.		D
BACK TENSION CASSETTE GAUGE	SSS-1004	COMMON	This gauge is used for supply reel torque alignment.		E
GUIDE POLE HEIGHT ADJUSTING JIG	SSJ-1005B	G-7/8 CHASSIS	Used to adjust tape height to the video head.		F
DRUM REPLACEMENT JIG	SSJ-1007	COMMON	This jig is used when replacing the VCR's upper drum.		G
ALIGNMENT TAPE		*SYSTEM*	*VIDEO*	*AUDIO*	H
SR1-2	SSJ-1014C	PAL	LION	6KHz	
SR2-2	SSJ-1014D	PAL	COLOR BAR	1KHz	
SVJ-2	SSJ-1014F	PAL	PROGRAM	MONO	
SHR2-2	SSJ-1014H	PAL	COLOR BAR	L:1KHz, R:400Hz	
SHVJ-2	SSJ-1014J	PAL	PROGRAM	Hi-Fi	
CASSETTE HOUSING ASSEMBLE JIG	SSJ-1012	COMMON	This jig is used for cassette housing assembly.		I
TORQUE GAUGE	SSJ-1009	600 g	This jig is used to check and adjust the torque of take up/supply reel.		J

ATTACHMENT 1 : SERVICE JIG KIT LIST.

1. DRUM REPLACEMENT JIG
2. GUIDE ROLLER ADJUSTING DRIVER
3. CASSETTE HOUSING ASSEMBLY JIG
4. CERAMIC DRIVER
5. ADJUSTING DRIVER
6. CAP ADJUSTING DRIVER
7. BOX DRIVER
8. + DRIVER (3/5/6mm)
9. - DRIVER
10. HEX WRENCH (0.9/1.2/2mm)

A	B	C
		
D	E	F
		
G	H	I
		
J	K	
		

3-2. Reel Disk Heights

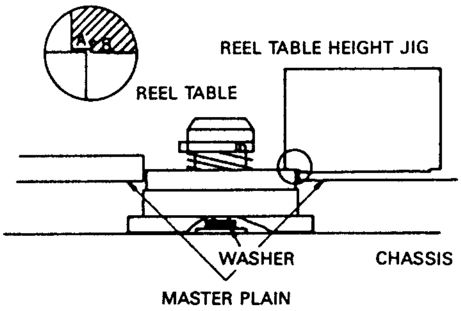


Fig.1

The height of the supply and take-up turntables should be the same, +0.2/-0.2mm. Turntable heights are adjusted by changing plain washer stack under each turntable. Check turntable heights by installing the Master Plain. Set the reel disk height jig in place and check the height of the supply and take up turntables. (See Fig. 1)
The size of washer is 0.5mm (3.2 mm ID). This washer should be used to achieve equal reference heights for both truntables.

Note:
For proper height point "A" should slide over the reel disk and point "B" should not.(Fig. 1)

3-3. Back Tension Adjustment (Fig. 2)

BACK TENSION METER

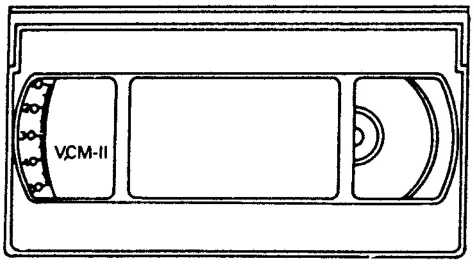


Fig.2

When the back tension is properly adjusted, the service test tape recorded will play back with minimum skew error-picture displacement in line following head switching. The tension is set as follows

1.Load the VCR with the back tension adjustment tape.
2.Place the VCR in the "play" mode.
3.Read the scale on the reel disk(S).
4.This reading should be between 39.5 and 44.5
5.After loosening the screw, move the Fig 3 tension spring in direction "B", If the tension adjustment tape reads 45 or higher, in direction "A" when it is 39 or lower, and adjust the back tension for a nominal reading of 42 on the scale.
6. Recheck the arm tension position when the back tension is changed (6 or more).

Note:
The VCR must be in a horizontal position for this adjustment.

3-4. Arm Tension Position Adjustment (Fig. 3)

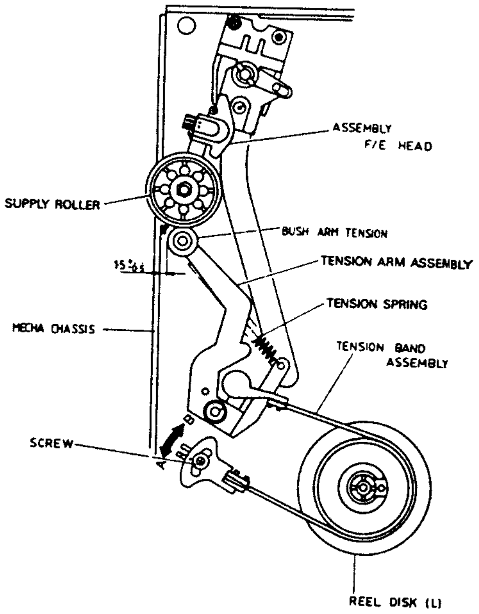


Fig.3

1.After removing the housing assembly, mommentarily short the tenth pin of the deck joint. P.C.Board's connector CN 205 to ground.
2.Place the instrument in the "play" mode.
3.After loading is complete, loosen the screw holding the tension holder. A and adjust so that the clearance between lower edge of tension pole ass'y and chassis is 1.5mm ±0.5mm.
4. Tighten screw to secure adjustment.

3-5. Brake Torque Confirmation

1. Remove top cover and place VCR in the "stop" mode.
2.Clean the brake surfaces on turntables using "cloth" and solvent, before measuring torque.
3. Attach the torque gauge head to the torque gauge.
4. Place torque gauge on the reel disk (S) turntable.
5. Turn torque gauge in a clockwise direction until the brake begins slipping. Maintain "slipping" rotation and read torque.(torque reading should be more than 200 grams/cm)
6.Repeat for the take up side turning the torque gauge counterclockwire.
(reading should be more than 200 grans/cm)

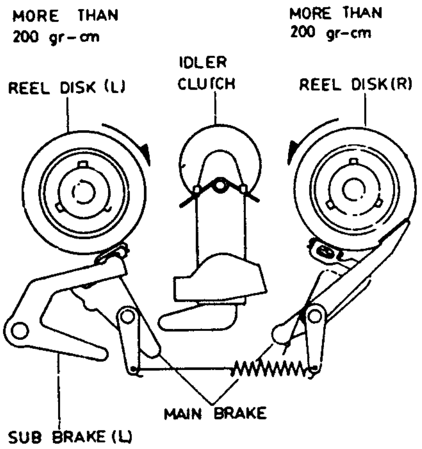


Fig.4

Note:
Brake torque problems can cause tape stretch, broken tape or loose tape in cassette.
These symptoms can usually be corrected by properly cleaning. If not replace brakes.

3-6. Play, Fast Forward, Rewind Torque Confirmation

1. Place the cassette holder in the loading state without inserting a cassette tape.
2. Attach the torque gauge head to the torque gauge.
3. Place torque gauge on the reel disk (T), operate VCR in the "SP record" mode.
   (Torque should measure 150 + 30 grams/cm)
4. Press Fast Forward button.
   (Torque reading should be 600 grams/cm minimum)
5. Place torque gauge on the reel disk(S) and operate instrument in the "rewind" mode.
   (Torque reading should 600 grams/cm minimum)

3-7. Rough Tape Travel Check

Using a blank tape, place the VCR in "play" mode and note the following.

1. The tape should be in full contact with all tape guide posts.
2. The tape should be crease-free with no slack.
3. The supply roller should be moving freely.
4. The tape should be perpendicular to the longitudinal axis of the heads when crossing the erase head and the A/C head.
5. The tape should be centered top to bottom on the head when crossing the full erase head.
6. The tape should follow the lower-edge guide surface on the lower drum.

3-8. Creasing or Slack Tape.

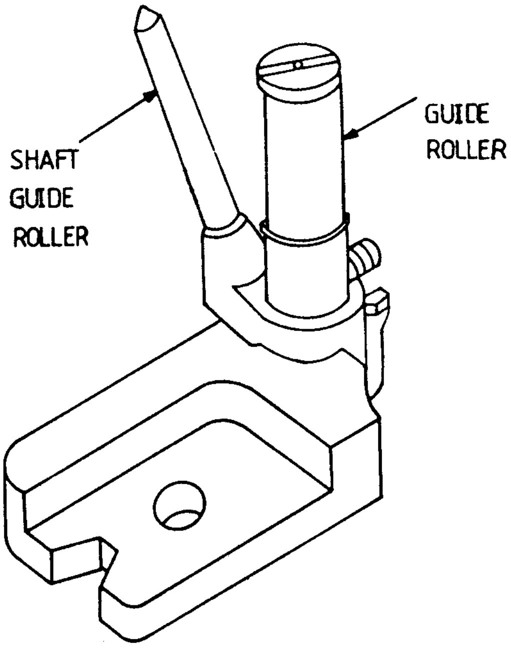


Fig.5

Load the VCR with a blank tape and place in "play" mode.
With the tape running, inspect the tape path for creasing or frilling along top or bottom edges of tape. If the tape is creasing or frilling, check the tape as it goes "on" and comes "off" the lower drum.
The tape should follow the lower edge guide surface on the drum. If the tape is high on the guide surface, rough adjust guide rollers to correct this condition. (use guide roller adjusting driver)
It will now be necessary to perform guide rollers adjustments and confirm interchangeability.

3-9. Mechanical Interchangeability Consideration

The tape-guide adjustments position the tape so that the prerecorded tracks on the test tape ailgn perfectly with the scan of the video head assembly. The mechanical interchangeability adjustment procedures will insure that a tape recorded on the VHS recorder will playback properly on another machine.

Usually little or no mechanical adjustment is required after routine (head replacement) servicing. Before making any adjustments, perform the following interchangeability confirmation procedure to determine if adjustment is required. IF the video heads are replaced, it will also be necessary to confirm the PG shifter adjustment.

If major mechanical servicing was perfomed (tape guide replacement, etc.) perform "Rouge Tape Travel Adjustment" befor using test tape.

3-10. Interchangeability Confirmation

This confirmation check should be performed after any servicing operation that could adversely affect the tape path; i.e.Lower drum motor replacement, tape guide replacement, audio/control head replacement, etc. If unit passes this confirmation check, no tape guide adjustrment is required.

Preliminary:
The adjustment should be preformed after the tracking preset adjustment is completed.

1.Connect a channel-1 scope probe (2V/div.;5ms/div.) to TP603 (Main-B P.C.B; H'd SW 25HZ).
2.Connect a channel-2 scope probe (10mV/div.) to TP(W35) (Main-A P.C.B; PB FM Level).
3.Play monoscope signal on test tape. (Alignment Tape SR1-1. See Jig List)
4.Adjust tracking control (VR102) for maximum FM envelope amplitude (TP-W35 signal) at center of envelope.
5.Adjust scope vertical gain control so that maximum enveope amplitude is 1.8 - 2.4 graticule divisions.
6.Turn tracking contorl (VR102) to the left so that maximum envelope amplitude can be graticule divisions.
7.Confirm that the minimum envelope amplitude is 0.6 graticule divisions or more. (Fig. 6)
8.Turn tracking control (VR102) to the right so that maximum envelope amplitude is 1 graticule division.
9.Confirm that the minimum envelope amplitude is 0.6 graticule division or more.(Fig 6)
10.If roading are correction, no guide roller adjustments, are necessary.
11.Set tracking control to detent (fixed) position. Adjust Control Track/Audio Head assembly position (X- value) to obtain maximum FM envelope (TP-W35 signal) at the detent position.

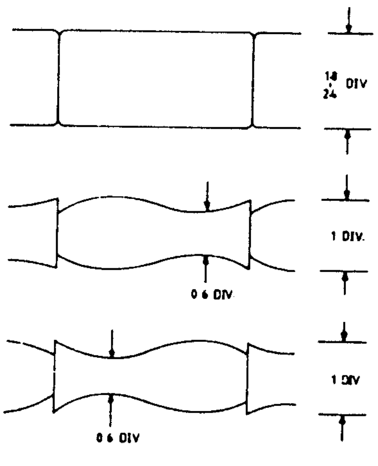


Fig.6

Note:
If the lower drum motor assembly has been replaced, perform the following electrical adjustments.

- PG Shifter adjustment.
- Record Chroma and Luminance Level adjustment.

3-11. Audio/Control Head (Height/Tilt/Azmuth)

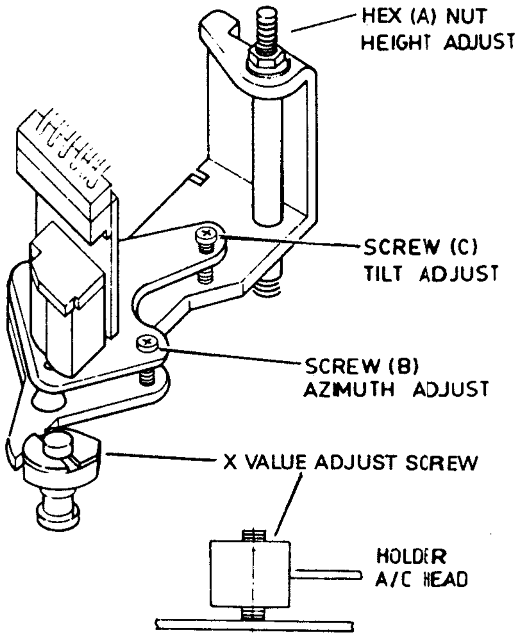


Fig.7

1.Connect a scope probe (0.5V/div.; 1ms/div.) to pin 1 of CN802 (Use audio out jack) located on the Main-C circuit board.
2.Playback a 1-KHz (color bars) audio signal on test tape.(Alignment Tape SR2-2.SeeJig list)
3.Alternately adjust height screw(A) and tilt adjust screw(C) for maximum output.
4.Playback a 6-KHz audio signal on test tape(SR1-2).
5.Adjust azimuth screw (B) for maximum output.
6.Repeat steps 3 and 5 for maximum 6-KHz and 1-KHz output.
7.Lock the HEX NUT (A) with paint.

3-12. Guide Rollers Adjustment

1.Connect channel-1 scope probe (2V/div.; 5ms/div.) to TP603. Trigger the scope on channel-1.
2.Connect channel-2. scope probe (10mV/div.) to TP-W35 (Main-A P.C.B; PB FM Level).
3.Set tracking control to detent (fixed) position and playback test tape monoscope signal. (Alignment tape SR1-2 Ref. Jig List). Slightly loosen set screw on pole base guide rollers.
4.Adjust guide roller down using guide roller adjusting driver (CW) untill bottom edge of tape slightly bows at the bottom of tape guide.

5.Monitor the head FM envelope at TP-W35.
6.Turn (CCW) guide roller (right guide) to obtain maximum amplitude at right side of head envelope.
7.Turn (CCW) guide roller (left guide) to obtain maximum amplitude at right side of head envelope.
8.Adjust tracking control (VR102) for best envelope.
9.Touch up guide rollers for maximum amplitude flat envelope. Tighten set screw at pole base of guide rollers.
10.Adjust control head position (if necessary) to move the best envelope condition to the tracking control detent positon.

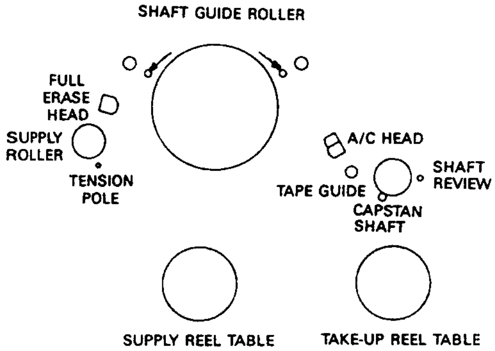


Fig.8

Note:
In the event correct head envelope is not obtainable, check Audio/Control (A/C) head adjustment.

3-13. Audio/Control (A/C)Head Horizontal Position (See Fig. 7)

This adjustment establishes proper tape tracking when the tracking control (VR102) is in its detent position.

1Connect a scope probe(10mV/div.;5ms/div.) to TP-W35(Main-A P.C.B. ; PB FM level)
2.Set tracking control(VR102) to the detent(fixed) position
3.Playback monoscope signal on test tape. (Alignment tape SR1-2.See Jig list)
4.Carefully move the A/C head base plate in either direction for maximum head envelope output by adjusting the X-value screw.

Note:
This adjustments should only be made after the tracking preset adjustment is completed.
(See Electrical Adjustments.)

3-14. Operating The VCR without Inserting a Cassette Tape

1.Remove the top cover.
2.Remove the housing assembly. (Fig. 12)
3.Plug the power cord of the VCR into the AC outlet.
4.Turn "on" the power switch of the VCR.
5.Connect a jumper to short circuit shortly between pin 10 and the pin 6 of connector.
6.The above procedure enables the VCR to be operated without loading a cassette tape.

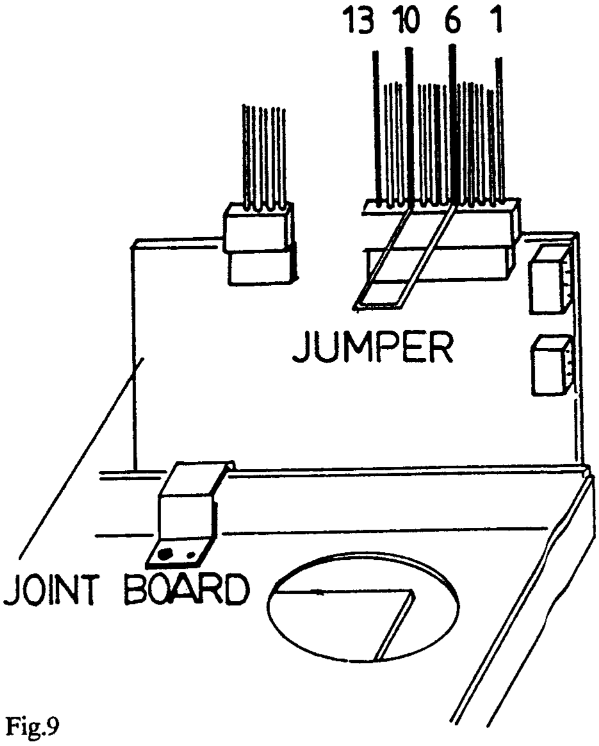
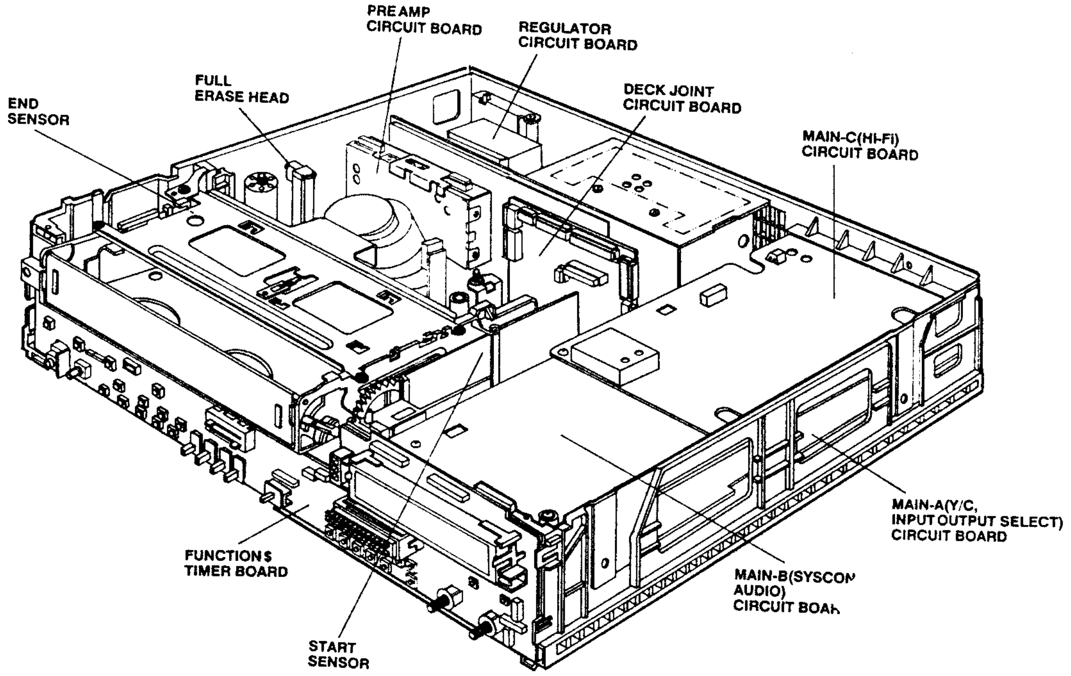


Fig.9

4. ELECTRICAL ADJUSTMENTS

4-1. CIRCUIT BOARD LOCATION AND IDENTIFICATION

(TOP VIEW)


PREAMP CIRCUIT BOARD
REGULATOR CIRCUIT BOARD
FULL ERASE HEAD
END SENSOR
DECK JOINT CIRCUIT BOARD
MAIN-C(HI-FI) CIRCUIT BOARD
MAIN-A(Y/C, INPUT OUTPUT SELECT) CIRCUIT BOARD
FUNCTIONS TIMER BOARD
MAIN-B(SYSCON AUDIO) CIRCUIT BOAR
START SENSOR

(BOTTOM VIEW)

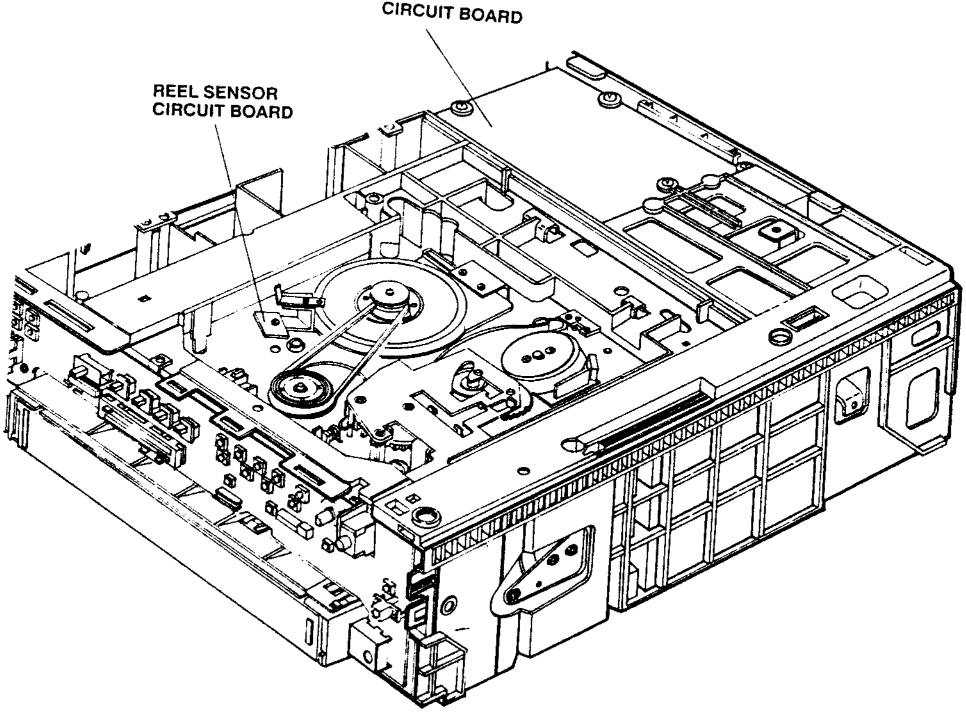

TUNER CIRCUIT BOARD
REEL SENSOR CIRCUIT BOARD

Fig.1

4-2. SERVO SECTION In MAINB. PCB

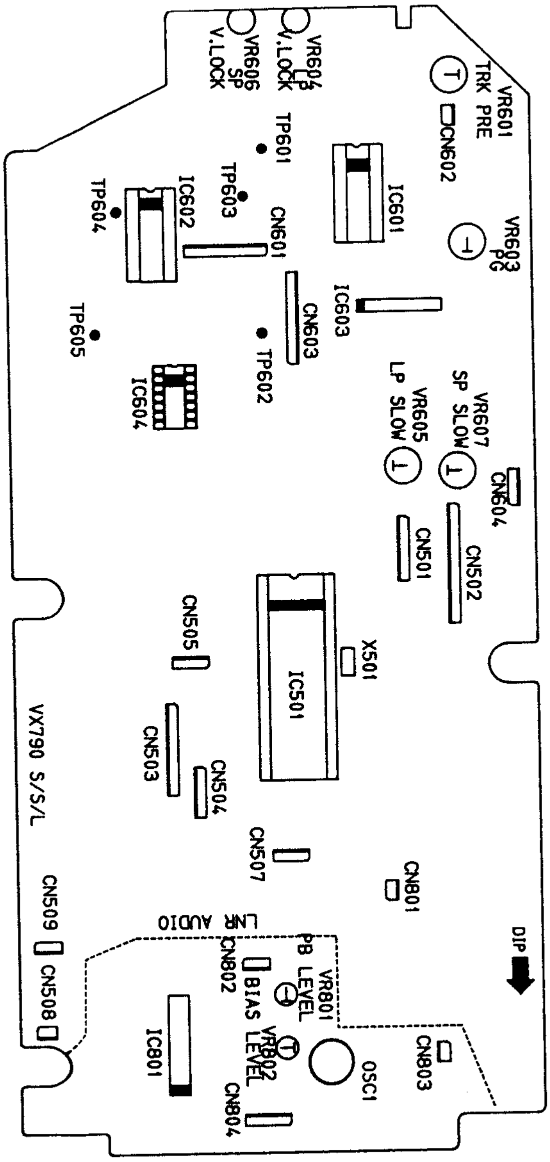

VR604 LP V.LOCK
VR606 SP V.LOCK
VR601 TRK PRE
CN602
TP601
TP603
IC602
TP604
CN601
IC601
VR603 PG
IC603
CN603
TP602
TP605
IC604
VR607 SP SLOW
VR605 LP SLOW
CN604
CN501
CN502
X501
IC501
CN505
CN503
CN504
CN507
CN801
VX790 S/S/L
CN509
CN508
LNR AUDIO
VR801 PB LEVEL
CN802
BIAS LEVEL VR802
IC801
OSC1
CN803
CN804
DIP

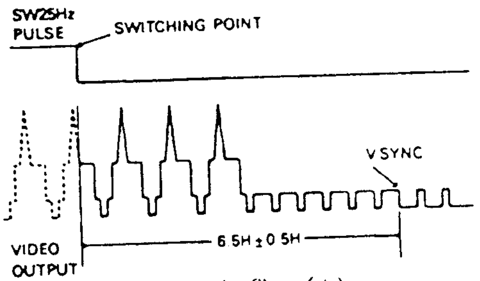
Fig. 2 Syscon/Servo/ Linear Audio SECTION in MAIN--B P.C.B COMPONENT SIDE

4-2-1. PG (Pulse Generator) Shifter Adjustment.

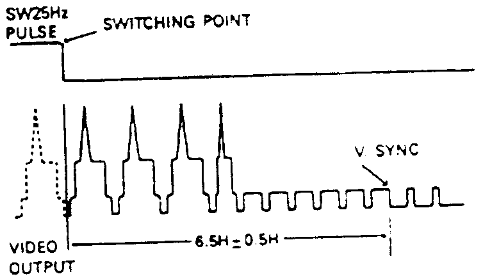
Equipment : Oscilloscope
Test Points : TP304 (Video Output Signal) Main. A
TP603 (H'd SW 25HZ) Main. B
Adjust : VR603 (PG shifter) Main. B

The pulse Generator (PG) shifter determines the Video head switching point during playback. Misadjustment of the PG Shifter may cause head switching noise in the picture and/or vertical jitter.

1. Load the intrument with an alignment tape and playback the color bar signal or monoscope signal. (Alignment tape SR2-2)
2. Connect a channel-1 scope probe (1V/div.: 50us/div.) to TP603. Trigger the scope on channel-1.
3. Connect a channel-2 scope probe (1V/div.) to TP304.
4. Set the scope to (+) slope and adjust the shifter control (VR603) so that trailing edge of the SW 25Hz pulse is placed 6.5H +/- 0.5H (horizontal) lines before the start of vertical sync pulse in Fig 3 (a)
5. And then, set the scope to (-) slope and confirm the PG in Fig 3 (b)


SW25Hz PULSE
SWITCHING POINT
V SYNC
VIDEO OUTPUT
6.5H±0.5H

(a) Slope (+)


SW25Hz PULSE
SWITCHING POINT
V. SYNC
VIDEO OUTPUT
6.5H±0.5H

(b) Slope (-)

Fig. 3 PG Shifter

4-2-2. Tracking Preset Adjustment

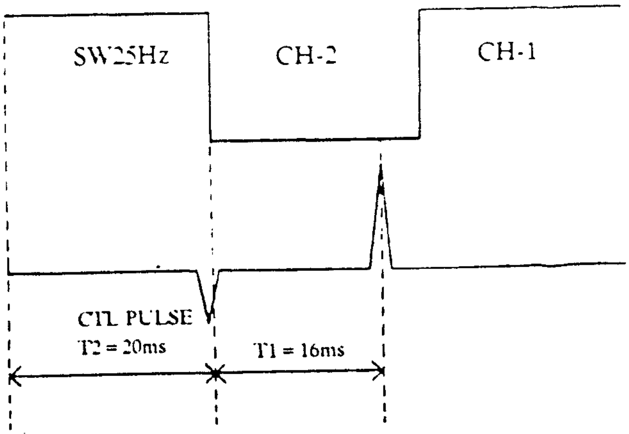

SW25Hz
CH-2
CH-1
CTL PULSE
T2 = 20ms
T1 = 16ms

Fig. 4 Tracking Preset

Equipment : Oilloscope
Test Point : TP603 (H'd SW 25Hz) Main. B
TP604 (CTL Pulse) Main. B
Adjust : VR601 (Tracking Preset) Main. B

The adjustment sets the optimum tracking during playback of a tape recorfed on this intrument so that it occurs at the detented position of the tracking contorl (VR102).

1. Load the instrument with an alignment tape and playback the color bar signal. (Alignment Tape SR 2-2)
2. Connect a channel-1 scope on probe (2V/div.) to TP603. Trigger the scope on channel-1.
3. Connect a channel-2 scope (1V/div .) to TP604.
4. Set the Tracking control (VR102) on the front panel to the detented position and adjust the tracking preset control (VR601) to align the pulse width T = 16 + 0.2mS. (Fig. 4)

NOTE :
Make sure that T2 > T1. If not, change the order of the CTL head wire for correct SERVO adjustment.

4-2-3. Vertical Lock Pulse Adjusstment

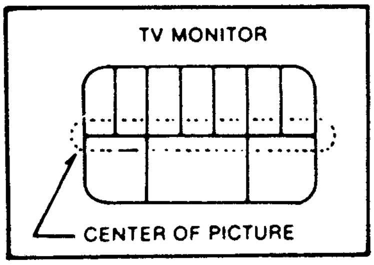

TV MONITOR
CENTER OF PICTURE

Fig.5

Equipment : TV monitor
Adjust : VR606 (V-Lock ADJ) ; SP Main. B
VR604 (V-Lock ADJ); LP Main B
This adjustment is to prevent vertically unstable picture in still mode.

1. Apply a PAL color bar signal to the video input jack (BNC) on the rear panel.
2. Locate the input select SW to EXT.
3. Insert a blank tape and make a recording for a few minutes.
4. Playback in STILL mode.
5. Adjust the V-Lock Control (VR604) so that the center of picture is most stable. (Fig.5)

4-2-4. Slow Tracking Preset

Equipment : TV Monitor
Adjust : VR607 (SP)
VR605 (LP)

This adjustment sets the optimum tracking during slow playback of a tape recorded on this VCR so that it accurs at the detent position of the slow tracring cantrol (VR101)

1) Load the VCR with an alignment tape (SR2-2) and playback the color bar signal, and press the slow key in remocon then slow playback begims.
2. Set the slow to the detent control (VR101) on the front panel to the detent position and adjust the slow presset contral (VR607;SP, VR605 ; LP) to the moise bar disappear.

4-3. LUMI /CHROMA SECTION in MAIN-A P. C .B

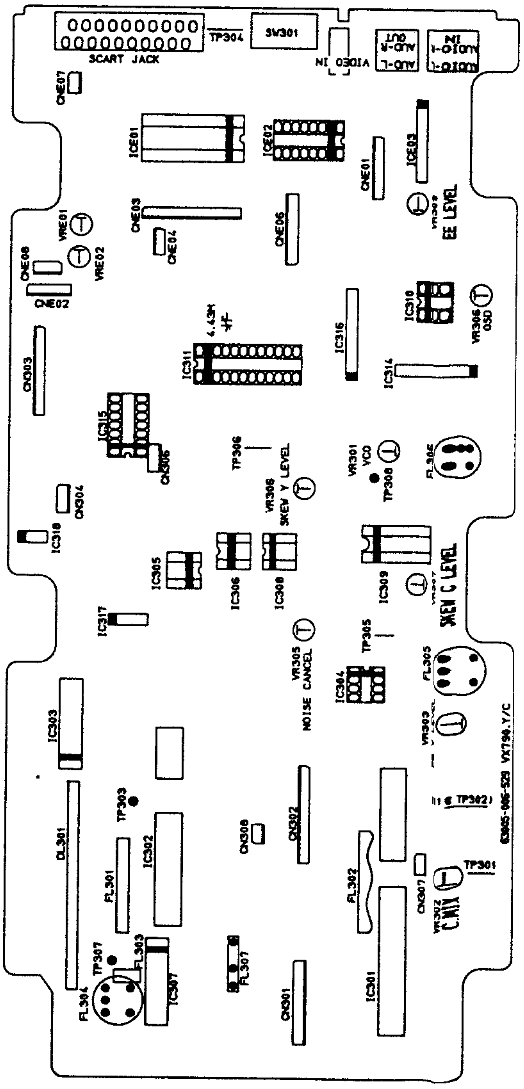

SCART JACK
TP304
SW301
VIDEO IN
AUD-L
AUD-R
OUT
AUDIO-L
AUDIO-R
IN
CNE07
ICE01
ICE02
ICE03
CNE01
CNE03
CNE04
CNE06
CNE08
CNE02
VRE01
VRE02
VR309
EE LEVEL
4.43M
IC311
IC316
IC310
VR306
OSD
IC314
CN303
IC315
CN305
TP306
VR306
SKEW Y LEVEL
VR301
VCO
TP308
FL306
CN304
IC318
IC305
IC306
IC308
IC309
VR307
SKEW C LEVEL
IC317
VR305
NOISE CANCEL
TP305
IC304
FL305
IC303
VR303
6365-005-528 VX790.Y/C
TP302
TP303
DL301
FL301
IC302
CN308
CN302
FL302
CN307
TP301
VR302
C.MIX
TP307
FL303
FL304
IC307
FL307
CN301
IC301

Fig.6 Luminance & Chrominance / Input Output Select Section in Main-A P. C. B component Side.

4-3-1. E-E Level Adjustment

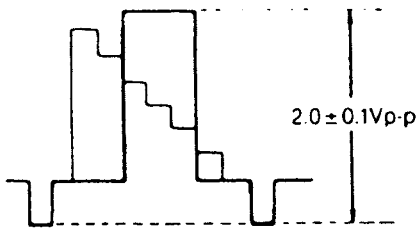


Fig. 7

Equipment : Oscilloscope
Test Point : TP304 (Video Out Level) Main A
Adjust : VR309 (E-E Level Control) Main A

This adjustment sets the output level of video signal to the specified level.

1. Apply a PAL color bar signal to the video input jack on the rear panel.
2. Locate the input selected SW to EXT.
3. Connect a channel-1 scope probe (0.5V/div.; 10us/div) to TP304
4. Adjust the E-E level control (VR309) for 2V p-p

NOTE:
When VCR set connected monitor (75 ohm termination) by scart jack adjust the E-E level control (VR309) for 1Vp-p.

4-3-2. Video Signal DC Level Adjustment

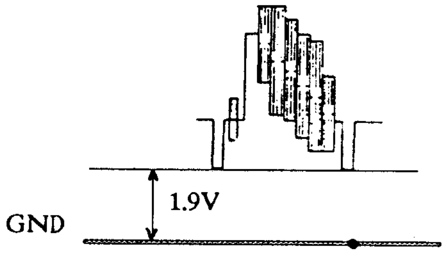


Fig. 8

Equipment : Oscilloscope
Test Point : Jumper pin 4 to pin 8 of IC310 Main A
Adjust : VR308 (Video DC Level Control) Main A

This adjustment sets the DC level of video signal to the speccified level.

1. Apply a PAL color bar signal to the video input jack on the rear panel.
2. Locate the input selected SW to EXT.
3. Connect a channel-1 scope probe (0.5.;10us/div.) to jumper of IC310-4pin to 8pin.
4. Adjust the DC level of video signal control (VR308)for 1.9V.
(Video DC level means the DC level of ground to SYNC tip)

4-3-3. PB Luminance (Y) Level Adjustment.

Equipment : Oscilloscope
Test Point : TP304 (Video Output Leval) Main A
Adjust : VR 303(PB Y Level Control) Main. A

This adjustment sets the ouput level of the PB luminance signal to the speified level.

1. Connect a channel-1 scope probe (0.5V/div.;10us/div.) to Tp 304.
2. Load the instrument with an alignment tape and playback the color bar signal. (Alignment Tape SR2-2)
3. Adjust the PB Luminance Level Control (VR 303) for 2Vp-p

NOTE:
When VCR set connected monitor (75 ohm termination) by scart jsck, adjust the PB level control (VR 303) for 1Vp-p

4-3-4. PB Chrominance Level Adjustment

Equipment : Oscilloscope
Test Point : TP304 (video Outut Level) Main, A
Adjust : VR302 (Chroma Level Control)Main. A

This adjustment sets the output level of PB video chrominance signal to the specifed level.

1. Connect a channel-1 scope probe (0.5V/div.) to TP304.

2. Load the instrument with on alignment tape and playback the color bar signal (Alignment tape SR2-2)

3. Adjust the PB chrominance Level Control (VR 302) for 0.6Vp-p.

NOTE:
When VCR set connected monitor (75 ohm termination) by scart jack, adjust the PB chrominance level control (VR302) for 0.3Vp-p.

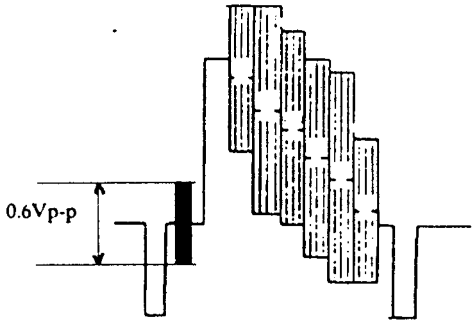


Fig. 9

4-3-5. Noise Cancel Adjustment

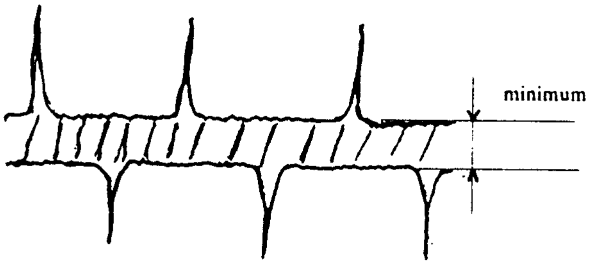


Fig. 10

Equipment : Oscilloscope
Test Point : TP 304 (Video Output Level) Main A
TP 302 (Noise Cancel Level) Main A
Adjust : VR 305 (Noise Cancel Control) Main A

This adjustment sets the level of noise to the minmum level.

1. Connect a channel-1 scope probe (0.5V/div.; 10us/div) to TP304, channel-2 scope probe (5mV/div)to TP302. Oscilloscope sets mode channel-2.
2. Load the instrument with an alignment tape and playback the color bar signal. (Alignment Tape SSR2-2)
3. Adjust the Noise Cancel control (VR305) for Minimum level.

4-3-6. Sub Carrier Frequency (4.43MHz) Adjustment

Equipment : frequency Counter
Test Point : Tp306 (VXO OUT) Main.A
Adjust : VC301 (Sub Carrier Frequency) Main. A

This adjustment sets the 4.43MHz VXO oscillation frequency accurately.
When this adjustment is incomplete, the color of blue back is disabled.

1. Connect a frequency counter to TP306.
2. Adjust the sub Carrier Frequency Control (VC301) so that the frequency reads 4.433619 MHz +/- 50Hz

4-3-7. SECAM DET Adjustment
(OPTION: Used ForVX-Series Model)

Equipment : Oscilloscope
Test Point : TP307(SECAM DET Level) Main A
Adjust : FL304(SECAM DET Control) Main A

1. Apply a SECAM color bar signal to the video input jack on the ear panel.
2. Locate the input selected SW to EXT.
3. Connect a channel-1 Scope probe (1V/div.) to TP307
4. Insert a blank tape and make a recording
5. Adjust FL304 for 4.2Vp-p

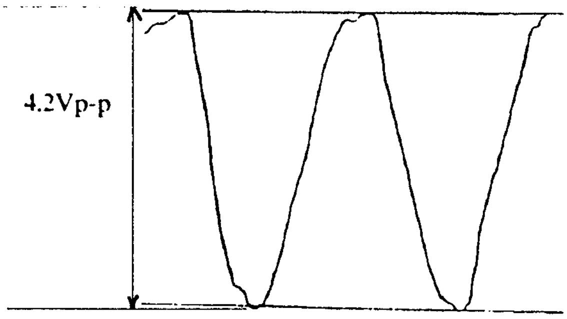


Fig. 11 SECAM DET LEVEL

4-3-8. REC FM Current level Adjustment (Pre-AMP)

Equipment : Oscilloscope
Test Points : TP1 (REC Current Level) Pre-AMP
TP603 (H'd SW 25Hz) Main B
Adjust : VR1 (The left VR of Pre-AMP)
This adjustment sets bar level of REC CHROMA to the optimum level.

1. Apply a PAL color bar signal to the video input jack on the rear panel.
2. Locate the input selected SW to EXT.
3. Connect a channel-1 scope probe (50mV.; 1us/div.) to TP1 (Pre AMP). Connect a channel-2 scope probe (1V/div.)to Tp603 (Main -B board.)
4. Insert a blank tape and make a recording.
5. Adjust the FM current control (VR1) for 100mV.

4-3-9. REC CHROMA Level Adjustment (Pre-AMP)

Equipment : Oscilloscope
Test Point : TP1(REC Current Level) Pre-AMP
TP603 (H'd SW 25Hz) Main B
Adjust : VR2(The right VR of the Pre -AMP)

This adjustment sets the level of REC CHROMA to the optimum level.

1. Apply a PAL color bar signal to the video input jack on the rear panel.
2. Locate the input selected SW to EXT.
3. Connect a channel-1 scope probe (50mV/div.; 1us/div) of TP1(Pre-AMP).
4. Connect a channel-2 scope probe to TP603
5. Make a short pin3(GND) and pin 6 (REC Y FM) of wafer -CN1(Pre-AMP)
6. Adjust the REC CHROMA level control (VR2) for 24mV.

4-3-10. O. S. D Level Adjustment
(OPTION : Used For OSD Function Model)

Equipment : Oscilloscope		
Test Point : TP304 (Video Out)		Main A
Adjust : VC303 (Horizontal Position)		Main A
VR308 (OSD Level ADJ)		Main A

1. Apply a color bar signal to the input jack on the rear panel.
2. Locate the input select SW to EXT.
3. Push twice the display key on the REMOCONso that OSD is shown at the TV monitor.
4. Adjust OSD position control (VC303) so that OSD sets on the center of TV monitor .(See Fig. 12)
5. Adjust the OSD level control (VR308) for 100% White level. (See Fig. 13)

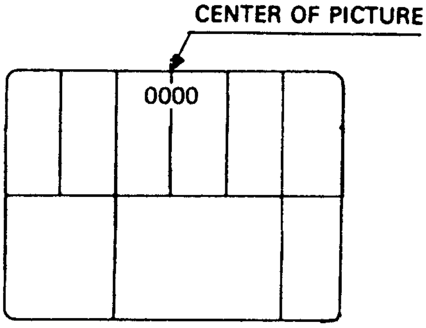


Fig.12

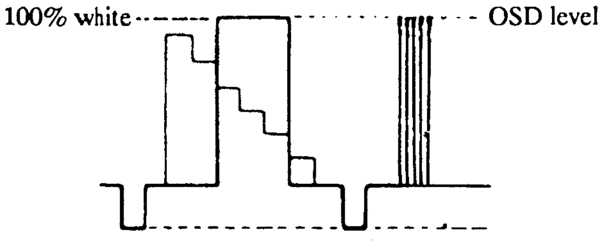


Fig.13

* Skew Compensation adjustment (LP Mode)

4-3-11. 2Fh Oscillator Adjustment (LP Mode)

Equipment : Oscilloscope
Test Point : TP304 (Video Out), TP308
Adjust : VR301

This adjustment sets the 2FH (= 31468Hz) Oscillation freguency accurately. When this adjustment is incomplete, skew compensation is disabled.

1. Apply a PAL Color bar signal to the video input jack on the rear panel.
2. Connect a channel-1 scope probe (0.5V.; 10us/div.) to TP304, and channel-2 scope probe (1V/div) to TP308. Source of Oscilloscope sets channel-2, mode sets dual.
3. Adjus VR301 so that 2Fh wave form appears like

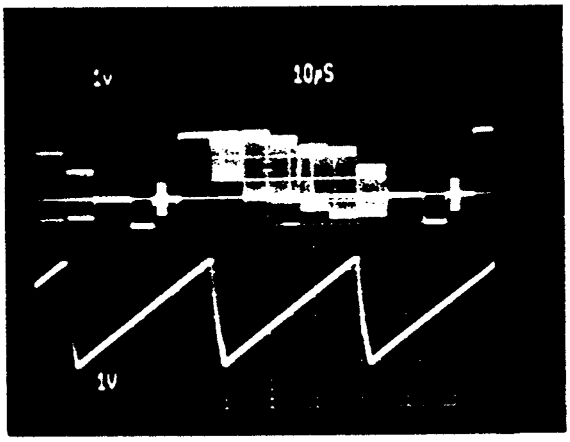


Fig.14

4-3-12. 1/2 FH Tuning Coil Adjustment (LP Mode)

Eqquipment : Oscilloscope
Test Point : TP304 (Video Out)
TP305 (1/2 FH Out)
Adjust : FL305

This adjustment sets the 1/2 FH(= 7.8KHz) Tuning Coil freguency accurately. When this adjustment is incomplete, sometimes color is missing in LP search mode.

1. Load the instrument with a PAL LP color bar tape, and playback the LP color bar signal.
2. Connect a channel-1 scope probe (0.5V.; 20u/div) to TP304 and channel-2 scope probe (0.5V/div) to TP305. Source of oscilloscope sets CH2, Mode sets DUAL and ALT.
3. Adjust FL305 sothat the locations of an apex and a floor accord with those of bursts like Fig. 15

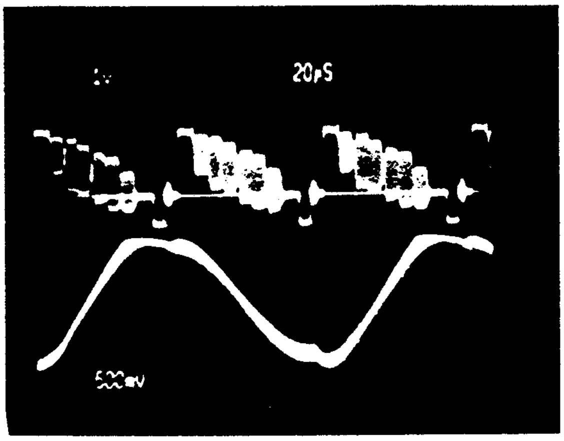


Fig 15

4-3-13. Skew compensation Luminance Level

Adjustment : LP Mode
Equipment : Oscilloscope
Test Point : TP304 (Video Out)
TP603 (HEAD Switching)
Adjust : VR306

This adjustment sets the luminance level of skew compensation to the optimum level.

1. Load the instrument with a PAL LP collor bar tape, and playback the LP color bar signal.
2. Select a FF serch mode.
3. Connect a channel-1 scope probe (0.2.; 5ms/div) to TP304, and channel-2 scope probe (1V/div)to TP603. Source of oscilloscope sets CH2, Mode sets CH1.
4. Adjust VR306 sothat Luminance signal output levels become continuous same level like Fig.16.

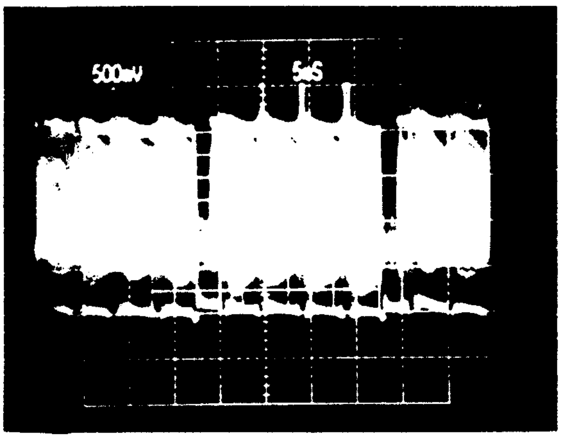


Fig 16

4-3-14. Skew compensation Color Level

Adjustment : LP Mode
Equipment : Oscilloscope
Test Point : TP304
Adjust : VR307

This adjustment sets the color level of skew compensation to the optimum level.

1. Load the instrument with a PAL LP color bar tape and playback the LPcolor bar signal.
2. Select a FF search mode.
3. Connect a channel-1 scope probe (0.2V.;5ms/div)to TP304, and channel-2 scope probe (1V/div) to TP603. Source of oscilloscope sets CH2, mode sets CH1.
4. Adjust VR307 sothat color signal output levels become continuous same level like Fig. 17

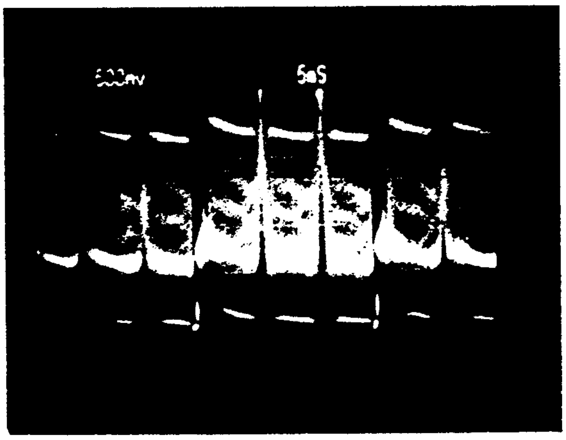


Fig 17

4-4. Hi-Fi SECTION in Main C P. C. B

NOTES:

* Unleess otherwise specified, set the switches on the front panel as follows.

Audio monitor select switch :	Hi-Fi
Source select switch :	EXT
ALC switch :	AUTO

* Connect 47K-ohm loads to both channels L and R of the audio line output terminals.

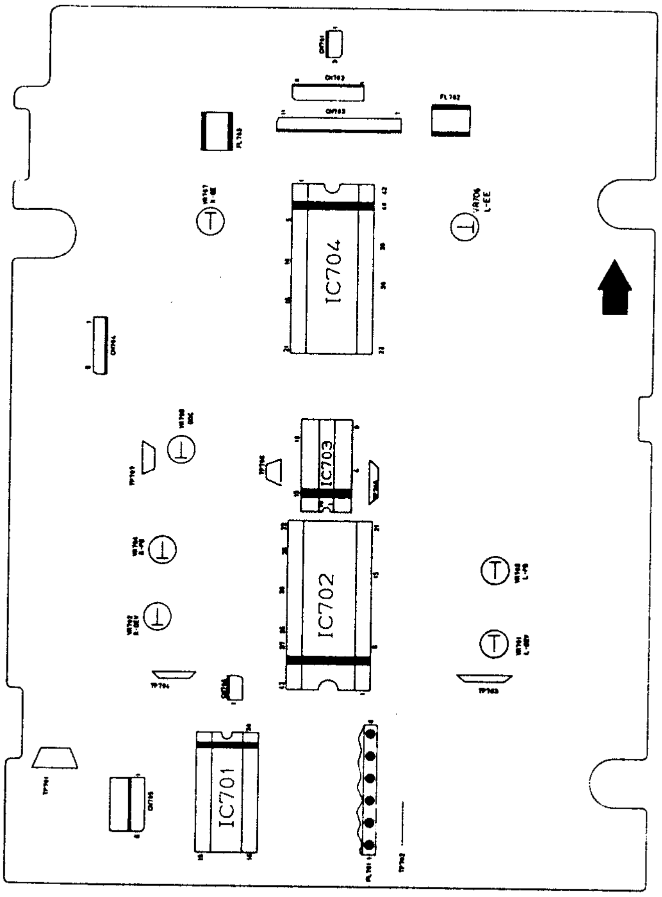


Fig.18 Hi-Fi Section Main-C P. C. B Component side

4-4-1. E-E Level Adjustment

Equipment : Sinewave Signal Gunerator
AC voltmeter
Test Point: Audio Output Jack
Adjust : VR706 (L-CH EE Level) Main C
VR707 (R-CH EE Level) Main C

1. Set the ouput of signal generator to 1KHz, -8dbm (309mVrms).
2. Connect the signal generator to both audio in terminal.
3. Adjust VR706 so that the audio (L-CH) output level becomes-6dBm (388mVres).
4. Adjust VR707 so that the audio (R-CH) output level becomes 6dBm (388m Vrms)

4-4-2. Audio Playback Level Adjustment

Equipment : AC Voltmeter
Test Point : Audio Output Jack
Adjust : VR703 (L-CH PB Level) Main C
VR704 (R-CH PB Level) Main C

1. Connect a AC voltmeter to the audio output jack.
2. Playback the alignment tape (HR2-1).
3. Adjust VR703 so that the audio (L-CH) output level becomes-6dbm (388mVrms).
4. Adjust VR704 so that the audio (R-CH) ouput level becomes -6dBm(388mVrms).

4-4-3. Audio Deviation Adjustment

After this adjustment " Audio Playback Level Adjustment " must be completed.

Equipment : Sinewave Signal Generator
AC Voltmeter
Test Point : Audio Output Jack
Adjust : VR701 (L-CH Deviation Cotrol) Main C
VR702 (R-CH Devation Control) Main C

1. Set the output of signal generator to 1KHz-8dBm (309mVrms).
2. Connect the signal generator to both audio in terminal.
3. Adjust REC level control VR105 of front panel so that both audio output level becomes -6dBm (388mVrms).
4. Record the audio signal and playback the just recored portion.
5. Adjust VR701 so that the audio (L-CH) output level becomes -6dBm(388mVrms).
6. Adjust VR702 so that the audio (R-CH) output level becomes -6dBm (388Vrms).

4-4-4. Drop Out Level Adjustment

Equipment : Digital Voltmeter
Test Point : TP707 (Drop Out Level) Main C
Adjust : VR705 (Drop Out Level Control) Main C

1. Connedt a digital voltmeter to TP707 .
2. Playback the alignment tape SR2-2.
3. Adjust VR705 to obtain 2.6V.

4-4-5. Level Meter Adjustment

Equipment: Sinewave Signal Generator
Test Point : Level Meter
Adjust : VRE01(L-CH Level ADJ) Main A
VRE02 (R-CH Level ADJ) Main A

1. Set the output of signal generator to 1KHz, -8dBm (309mVrms) and supply it to audio input jack(L).
2. Adjust VR E01 so that the 0dB of L-CH level meter just lights up.
3. Adjust VR E02 so that the 0dB of L-CH level meter just lights up.

4-5. NORMAL AUDIO SECTION in Main B P.C.B

NOTES:

* Set the switchs on the front panel as indicated below.

Audio monitor select switch :	NOR
Source select switch :	EXT

* Connect 47K-ohm load to both channels L and R of the audio line output terminals.

* Perform the azimuth adjustment and height adjustment perfectly and then proceed the adjustments .

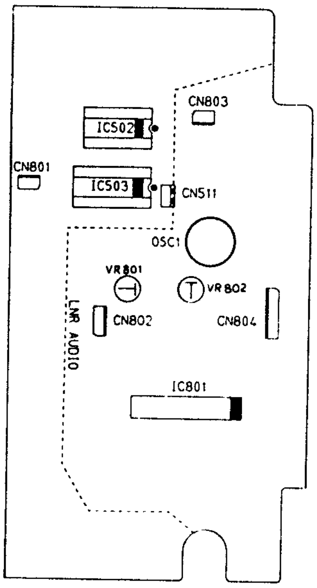

CN803
IC502
CN801
IC503
CN511
OSC1
VR801
VR802
LNR AUDIO
CN802
CN804
IC801

Fig.20 Normal Audio Section in Main -B P.C. B component Side

4-5-1. Playback Output Level Adjustment

Equipment : Signal Generator
AC voltmeter
Test Point : Audio Output Jack
Adjust : VR801 (PB Output Level Control) Main B

1. Connect AC voltmeter to the audio output jack and playback the alignment tape (SR2-2).
2. Adjust VR801 so that the playback level becomes-6dBm (388mVrms).

4-5-2. Audio Bias Current Adjustment

Equipment : ACVlotmetor
*Test Point :*TP1
TP2
Adjust : VR802 (Audio Bias Current ADJ) MainB

1. Connect a AC voltmeter to TP1(+) and TP(-). (Do not use long cable for connection)
2. Make a short circuit at terminal of the audio input.
3. Place the VCR in recording mode.
4. Adjust VR802 so that reading of AC Voltrenter becomes 2.2mVrms.

4-6. TUNER BLOCK ADJUSTMENT

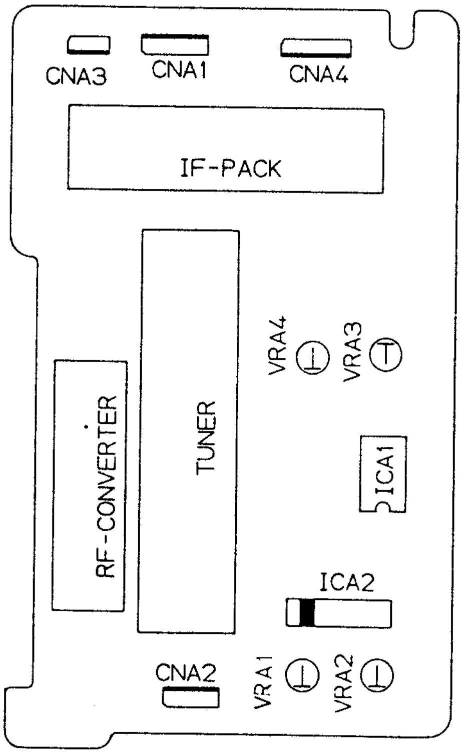

CNA3
CNA1
CNA4
IF-PACK
VRA4
VRA3
RF-CONVERTER
TUNER
ICA1
ICA2
CNA2
VRA1
VRA2

Fig.21 TUNER P. C. B Component Side

4-6-1. Dual Sound Level Adjustment

Equipment : AC voltmeter.
TV channel signal generator.
Test Point : Pin 2 and 3 of a connector CNA4 TUNER
Adjust : VRA3 (L-CH Sound Level ADJ) TUNER
VRA4 (R-CH Sound Level ADJ) TUNER

This adjustment sets the ouput level of the dual signal to the specified level.

4-6-1. Dual Sound Level Adjustment

Equipment : AC votmeter.
TV channel signal generaator.
Test Pint : Pin 2 and 3 of a connector CNA4 TUNER
Adist : VRA3(L-CH Sound Level ADJ) TUNER
VRA4(R-CH Sound Level ADJ) TUNER

This Adjustment sets the output level of the dual signal to the specified level.

4-6-1-1. L-CH Output Level Adjustment (Main)

1. Place the instrument in the E-E mode (TVmode)
2. Apply the ouput of the genertor to the RF IN Terminal on the rear panel.
3. Set the RF signal generator.

* Set the channel selector to CH2(48.25MHz)
* Condition
Dual : ON Pilot: ON Pre-emp : 50us
Deviation : +/-30KHz

4. Turn the VCR power on and select TV mode.
5. Set the channel on the front panel to CH2.
6. Connect a AC voltmeter to the pin2 of a connector CNA4.
7. Adjust the Sound (Audio) level control (VRA3) for-14dBs.

4-6-1-2. R-CH Output Level Adjustment (SUB)

1. connect a AC voltmeter to the pin3 of a connector CNA4.
2. Adjust the Sound (Audio) level control (VRA4) for -14dBs.

4-6-2. Stereo Sound Distortion and Output Level Adjustment.

Equiment : Oscilloscope, AC voltmeter,
TV Channel Signal Generator.
Test Point : Pin 2 of a connerctor CNA4. Main A
Adjust : VRA1 (Distortion Level ADJ) Main A
VRA2 (Output level ADJ) Main A

This Adjustment suppresses the Audio distortion and sets the output level of STEREO signal to the specified level.

4-6-2-1. Distortion Adjustment

1. Apply the output of the generator to the RF IN terminal on the rear panel.
2. Set the RF signal generator.

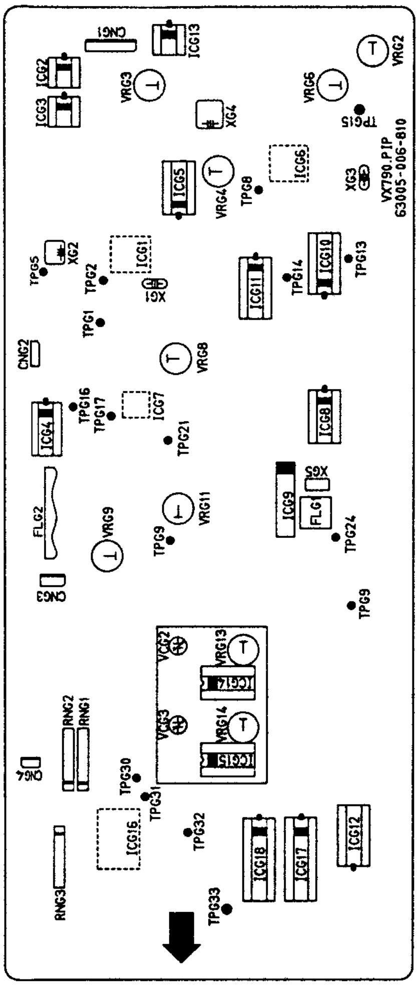
* Set the channel selector to CH2. (48.25MHz)
* Condition
Stereo : ON, Pilot: ON, Pre-emp : 50us
Deviation : +/- 30KHz

3. Turn the VCR power on and select TV mode.
4. Set the channel on the Front panel to CH2.
5. Connect a channel-1 scope probe (0.2V/div.) to the pin2 of a connector CN4.
6. Adjust the Distortion Control (VRA1) for minimum distortion.

4-6-2-2. STEREO Output Level Adjustment]

1. connect a AC voltmeter to the pin 2 of a connector CNA4
2. Adjust the Output Level Control(VRA2) for 14dBs.

4-7. PiP BLOCK ADJUSTMENT


CNG1
ICG13
ICG2
ICG3
VRG3
VRG6
VRG2
XG4
TPG15
ICG5
VRG4
TPG8
ICG6
XG3
VX790.PIP
63005-006-810
TPG5
XG2
TPG2
ICG1
XG1
ICG11
TPG14
ICG10
TPG13
TPG1
CNG2
VRG8
TPG16
TPG17
ICG7
TPG21
ICG8
ICG4
XG5
ICG9
FLG1
FLG2
VRG9
TPG9
VRG11
TPG24
CNG3
TPG9
VCG2
VRG13
ICG14
RNG2
RNG1
VCG3
VRG14
ICG15
CNG4
TPG30
TPG31
ICG16
TPG32
ICG18
ICG17
ICG12
RNG3
TPG33
T

Notes

Unless otherwiel spceified, set the switches on the front panel as follows.

Soure select switch : EXT

4-7-1. WCK Duty And Freguency Adjustment.

Equipment : Oscilloscope

Test Point : TPG31

Adjust: VRG13
VCG2

1. Connect a channel-1 scope probe (1V/div.; 10ns/div) to TPG31
Switch trigger sourle to CH1
2. Adjust VRG13 so that the duty of clock becomes symmetrical as shown Fig22.
3. Adjust VCG 2 so that the period of clock recomes 56ns +/- 1ns.

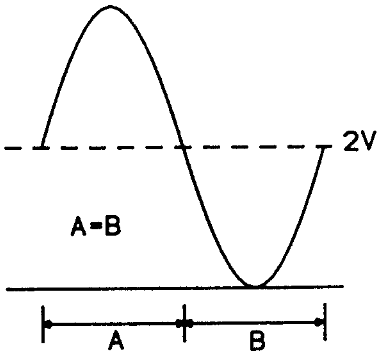


Fig.22

4-7-2. RCK Duty And Freguency Adjustment.

Equipment : Oscilloscope

Test Point : TPG 30

Adjust: VRG 30
VCR 3

1. Connect a channel -1 scope probe (1V/div.; 10ns) to TPG30 switch trigger source to CH1.
2. Adjust VRG30 so that the duty ay clock becomes symmetrical as shown Fig22
3. Adjustment VCG3 so that the period ay clock becomes 76ns +/- 1ns.

* When you adjust 4-7-1, 4-7-1 and 4-7-2 the GND of oscilloscope should be connected to the TPG33 only, which is the digital grourd.

* If your score has narrow time duration, make sure that " PULL IN x10 MAG " is pulled.

4-7-3. Write Sub-Y Level Adjustment.

Equipment : Oscilloscope
PAL color bar Pattern Generator.

Test Point : TPG 13

Adjust :VRG3

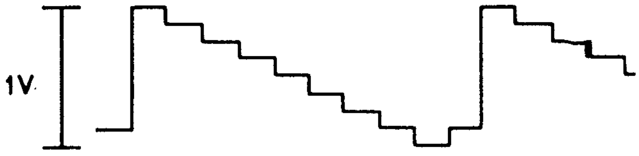


Fig. 23

1. Apply a PAL color bar signal to the video input jack on the rear panel.
2. Connect a channel-1 scope probe (0.2V/div.; 10us/div) to TPG13 and a channel-2 scope probe (1V/div)to TPG 8.
Switch trigger source to CH2.
3. Adjust VRG3 so that S(Y) LEVEL becomes 1V as shown Fig23.

4-7-4. Write Sub Tint Adjustment

Equipment : Oscilloscope
PAL color bar pattern generator.
Test Point : TPG 15
Adjust :VRG4

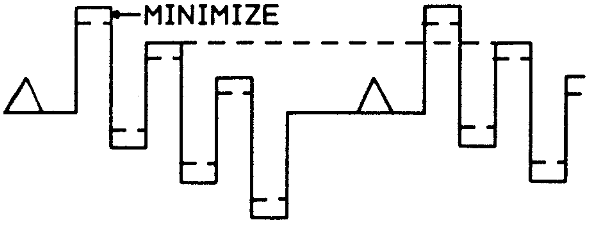


Fig. 24

1. Apply a PAL color bar signal to the video input jack on the vear panel.
2. Connect a channel-1 scope probe (0.2V/div.; 10us/div) to TPG 5 Switch trigger source to CH1. itself.
3. Adjust VRG 6 so that this signal becomes max.
4. Adjust VRG 4 so that this signal don't overlap as shown Fig24.

4-7-5. Write R-Y LEVEL Adjustment

Equipment :Oscilloscope
PAL color bar pattern generator
Test Point : TPG14
Adjust : VRG 6

1. Apply a PAL color bar signal to the video input jack on the rear panel
2. Connect a channel-1 scope probe (0.2V/div.; 10us/div) to TP14 and a channel-2 scope probe (1V/div) to TPG8.
3. Adjust VRG6 so that this signal becomes 1V as shown Fig25

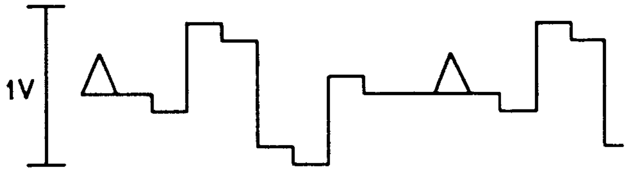


Fig.25

4-7-6. Read R-Y Level Adjustment

Equipment : Oscilloscre
PAL color bar pattern generator
Test Point : TPG 21
Adjust : VRG 11

1. Apply a PAL color bar signal to the video input jack on the rear panel.
2. Press the " PIP ON " button of remocon.
3. connect a channel-1 scope probe (0.2V/div.; 10us/div) to TPG21 and a channel-2 scope probe (1V/div)to TPG2. Switch trigger source to CH2
4. Adjust VRG11 so that this signal becomes 0.8V as shown Fig 26

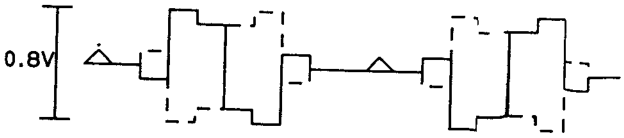


Fig 26

4-7-7. Main Video DC Level Adjustment

Equipment : Oscilloscope
PAL color bar patlern Generator
Test Point : TPG5
Adjust:VRG2

1. Apply a PAL color bar sigral to the video input jack on the rear panel.
2. Press the " PIP ON " button of remocon.
3. Connect a channel-1 scope probe (0.2V/Div.; 10us/div) to TPG 5 and a channel-2 scope probe (1V/div) to TPG 2
Switch trigger sourle to CH2
4. Adjust VRG5 so that main pedestal level is egual to sub pedestel as shown Fig. 27

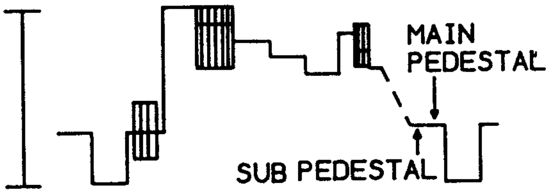


Fig.27

4-7-8. Read Y Level Adjustment

Equipment : Oscilloscope
PAL color bar pattern genertor
Test Point : TPG 5
Adjust : VRG2

1. Apply a PAL color bar sigral to the video input jack an the rear panel
2. Press the " PIP ON " button of remocon
3. Connect a channel-1 scope probe (0.2V/div.; 10us/div) to TPG 5 and a channel-2 scope probe (1V/div) to TPG 2
4. Adjust VRG 5 so that the Sub 100% white signal is equal to the main 100% white signal as shown Fig 28

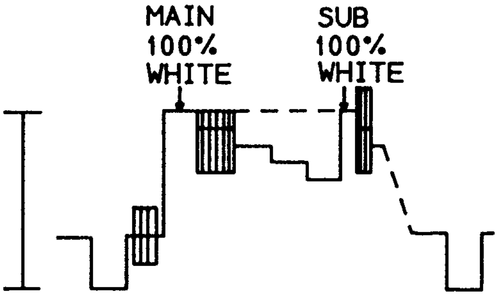


Fig.28

4-7-9. Read Sub Color Level Adjust

Equipment : Oscilloscope
PAL color bar pattern genrator
Test Point : TPG 5
Adjust: VRG 8

1. Apply a PAL color bar signal to the video input jack on the rear panel.
2. Press the " PIP ON " button ay remocon
3. connct a channel-1 scope probe (0.2V/div.; 10us/div) to TPG 5 and a channel-2 scope probe (1V/div) to TPG 2
4. Adjust VRG 8 so that the peak level ay Yellow in sub signal is equal to the level ay sub 100% white signal as shoun Fig 29.

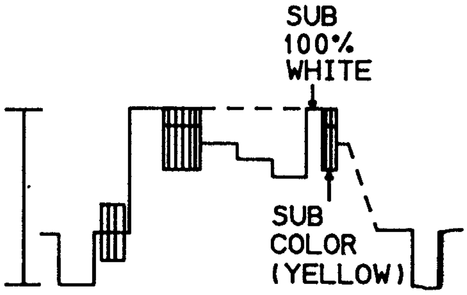


Fig.29

4-7-10. SECAM DET Adjustment
(Option : Used For VX Model)

Equipment : Oscilloscope
Test Point : TPG 24
Adjust: FIG 1

1. Apply a SECAM color bar signal to the video input jack on the rear panel
2. Connect a channel-1 scope (1V/div) to TPG 24
3. Adjust FIG 1 for max.

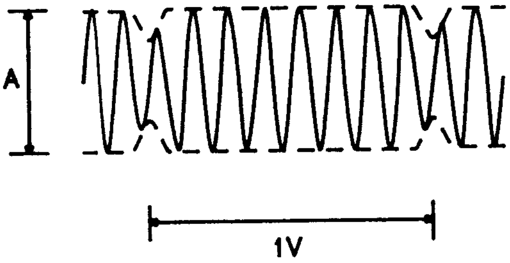
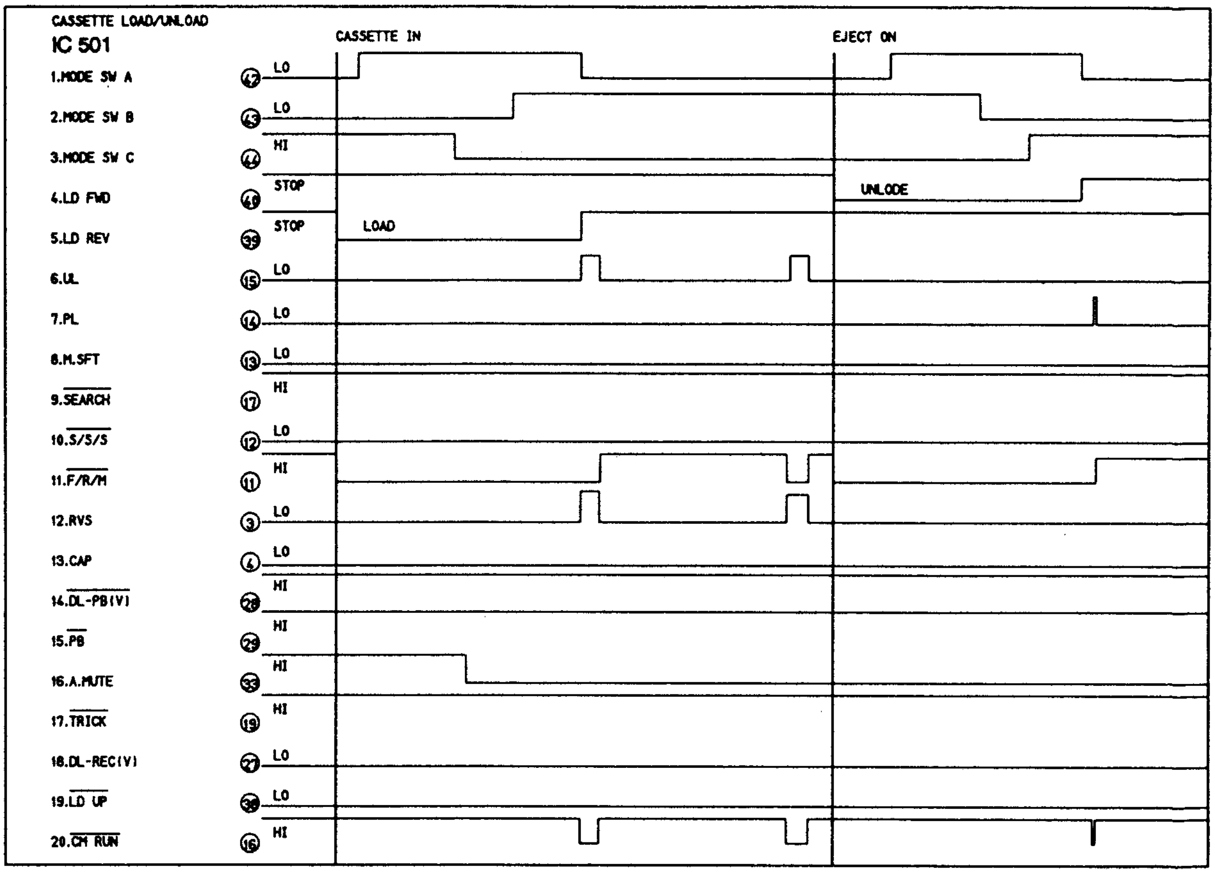
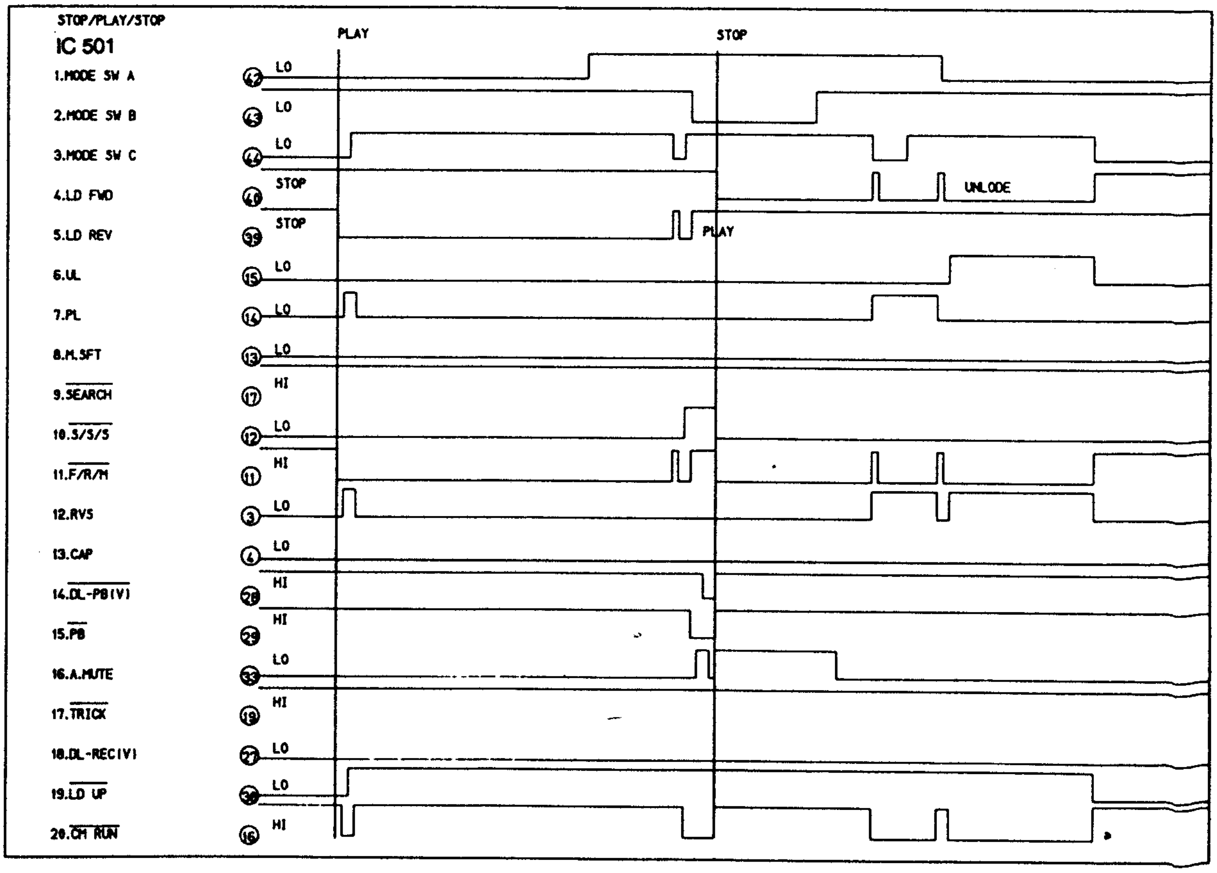


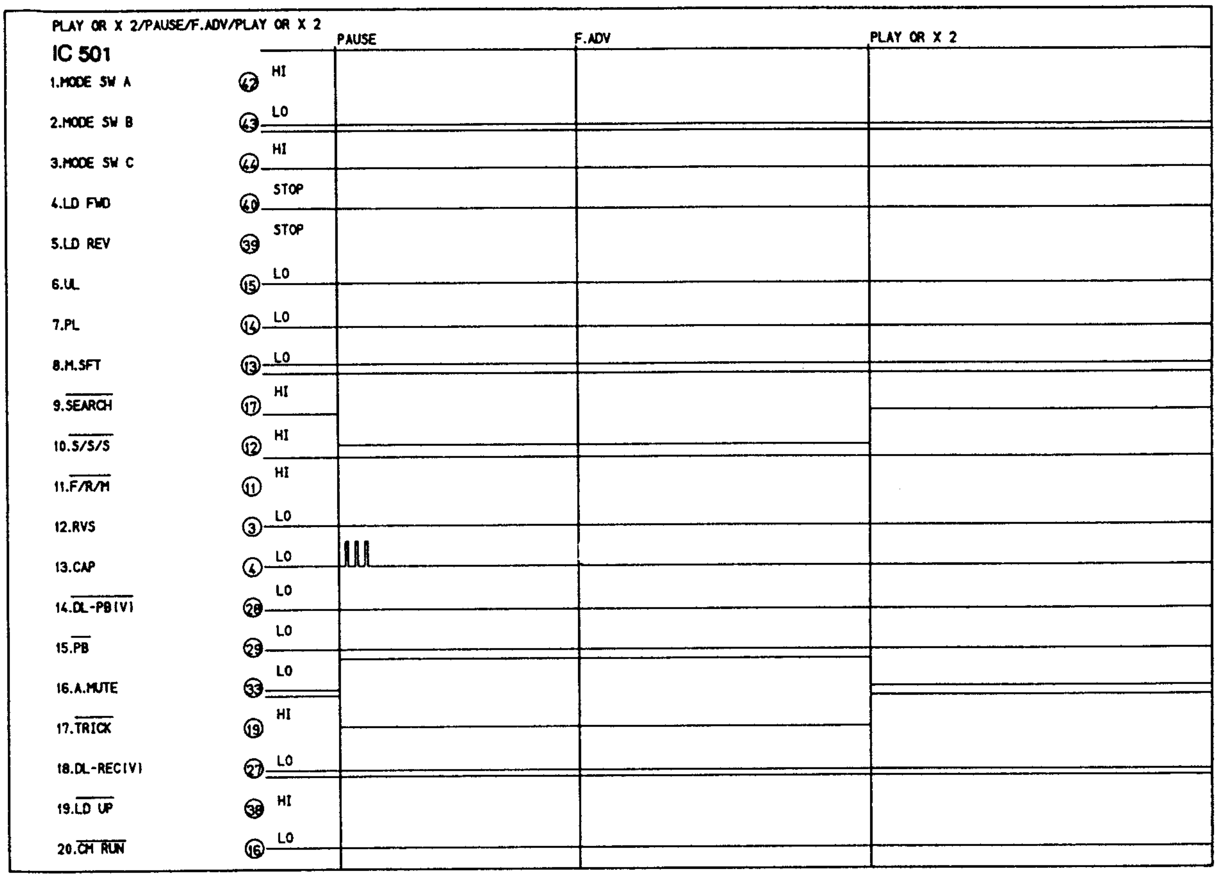
Fig.30

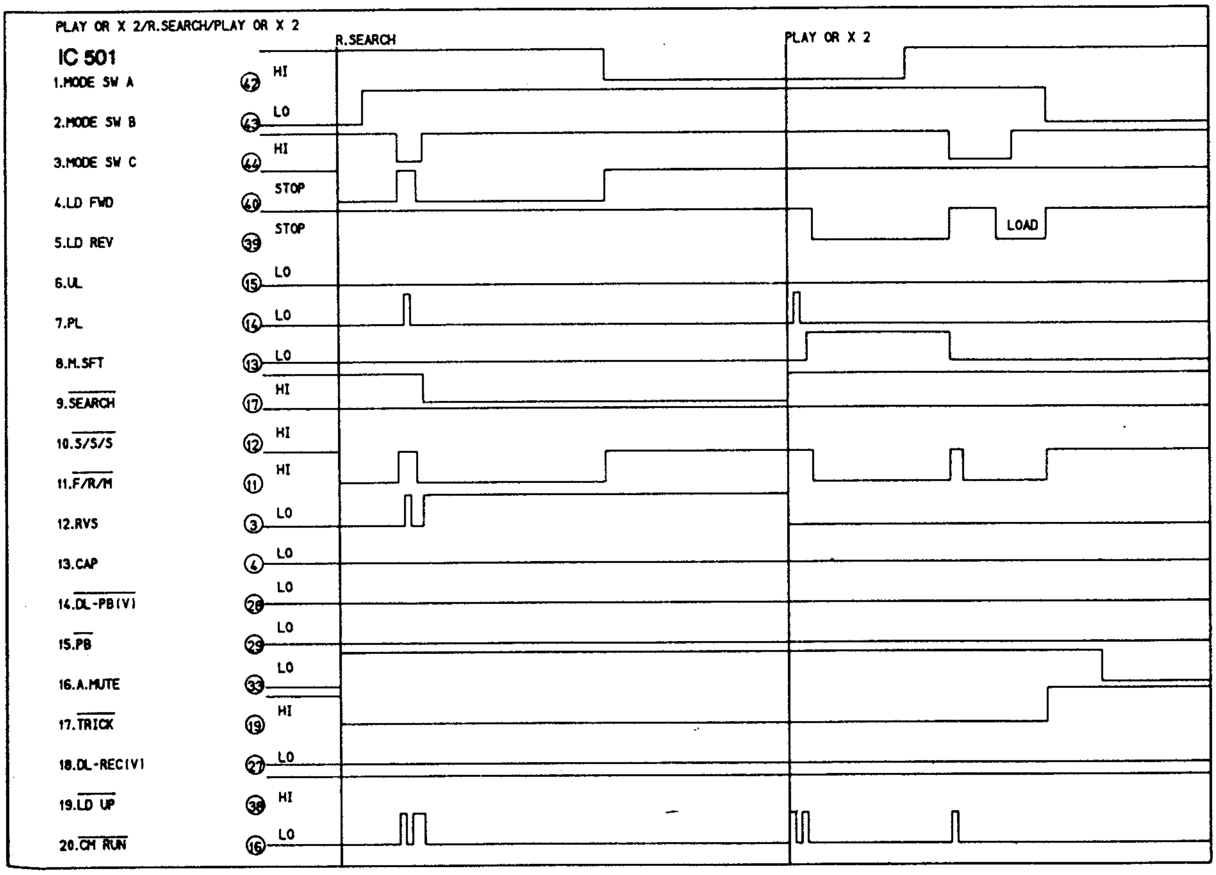
5. TIMING CHART / TROUBLESHOOTING GUIDE

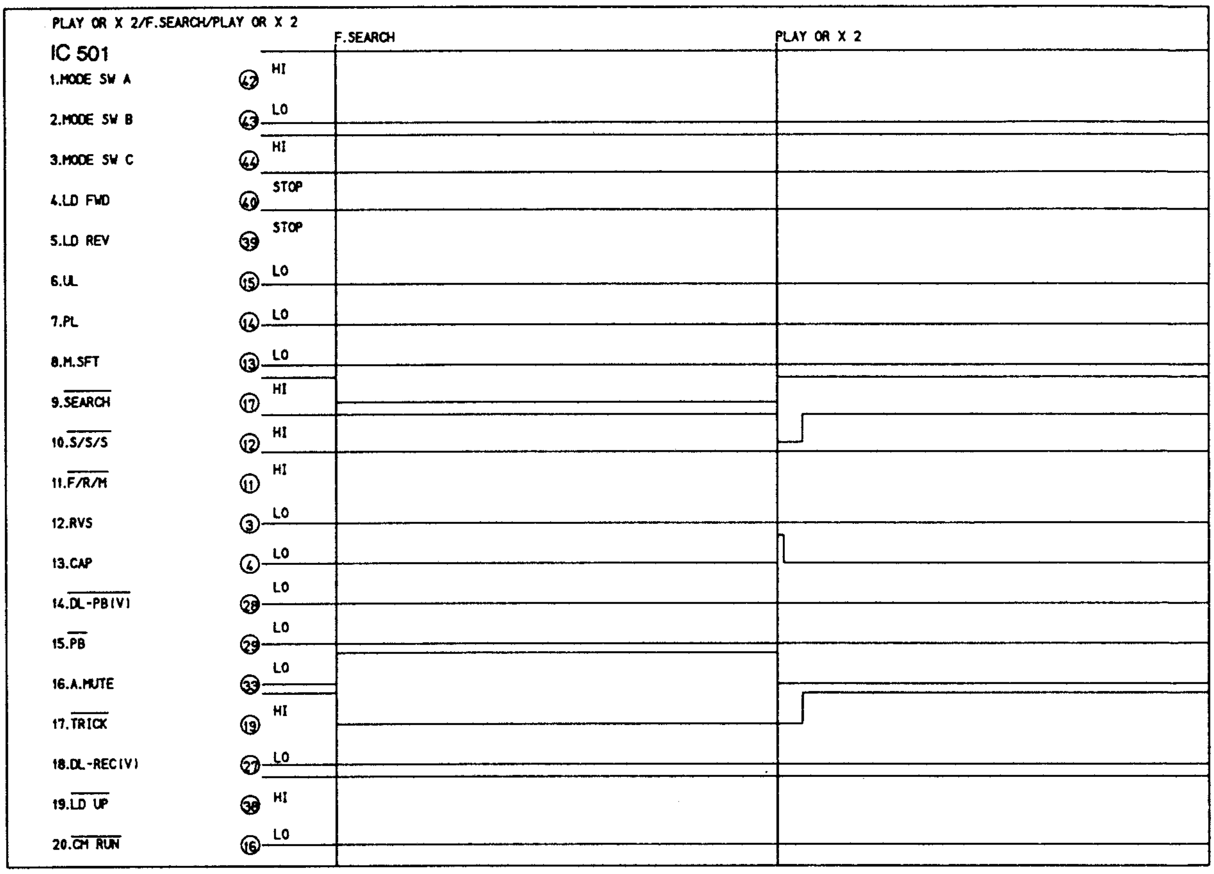
5-1. Timing Chart

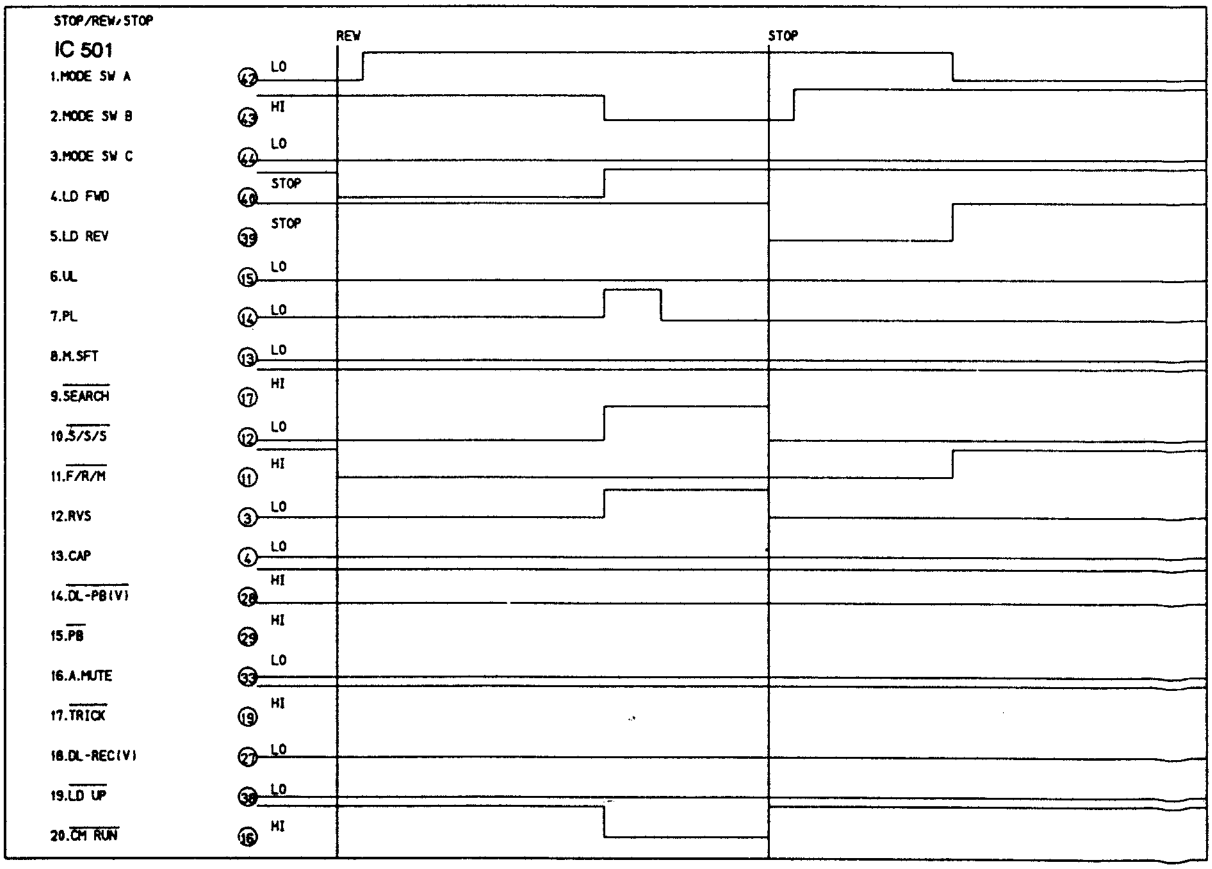

CASSETTE LOAD/UNLOAD
IC 501
CASSETTE IN
EJECT ON
1.MODE SW A ㊷ LO
2.MODE SW B ㊸ LO
3.MODE SW C ㊹ HI
4.LD FWD ㊵ STOP
UNLODE
5.LD REV ㊴ STOP
LOAD
6.UL ⑮ LO
7.PL ⑭ LO
8.M.SFT ⑬ LO
9.SEARCH ⑰ HI
10.S/S/S ⑫ LO
11.F/R/M ⑪ HI
12.RVS ③ LO
13.CAP ④ LO
14.DL-PB(V) ㉘ HI
15.PB ㉙ HI
16.A.MUTE ㉝ HI
17.TRICK ⑲ HI
18.DL-REC(V) ㉗ LO
19.LD UP ㊳ LO
20.CH RUN ⑯ HI

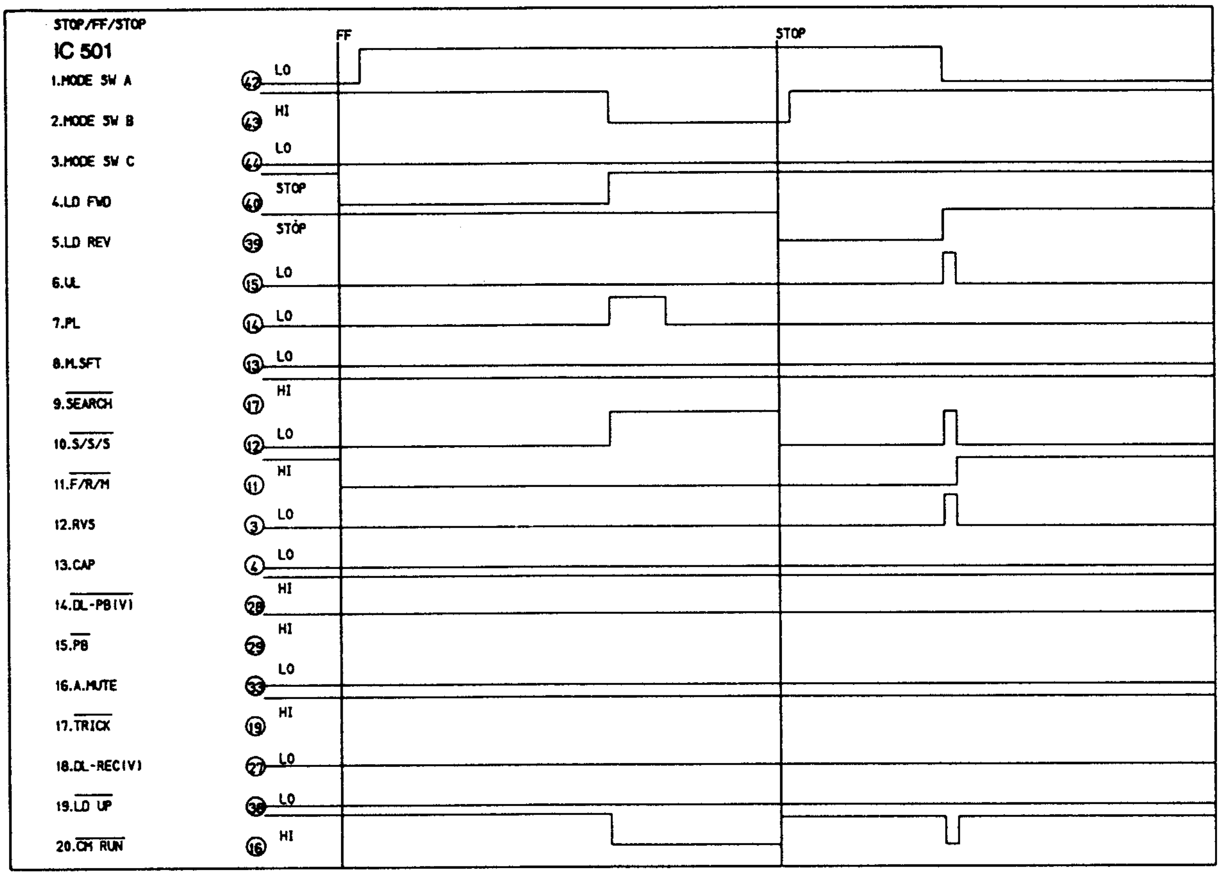

STOP/PLAY/STOP
IC 501
PLAY
STOP
1.MODE SW A ㊷ LO
2.MODE SW B ㊸ LO
3.MODE SW C ㊹ LO
4.LD FWD ㊵ STOP
UNLODE
5.LD REV ㊴ STOP
PLAY
6.UL ⑮ LO
7.PL ⑭ LO
8.M.SFT ⑬ LO
9.SEARCH ⑰ HI
10.S/S/S ⑫ LO
11.F/R/M ⑪ HI
12.RVS ③ LO
13.CAP ④ LO
14.DL-PB(V) ㉘ HI
15.PB ㉙ HI
16.A.MUTE ㉝ LO
17.TRICK ⑲ HI
18.DL-REC(V) ㉗ LO
19.LD UP ㊳ LO
20.CH RUN ⑯ HI

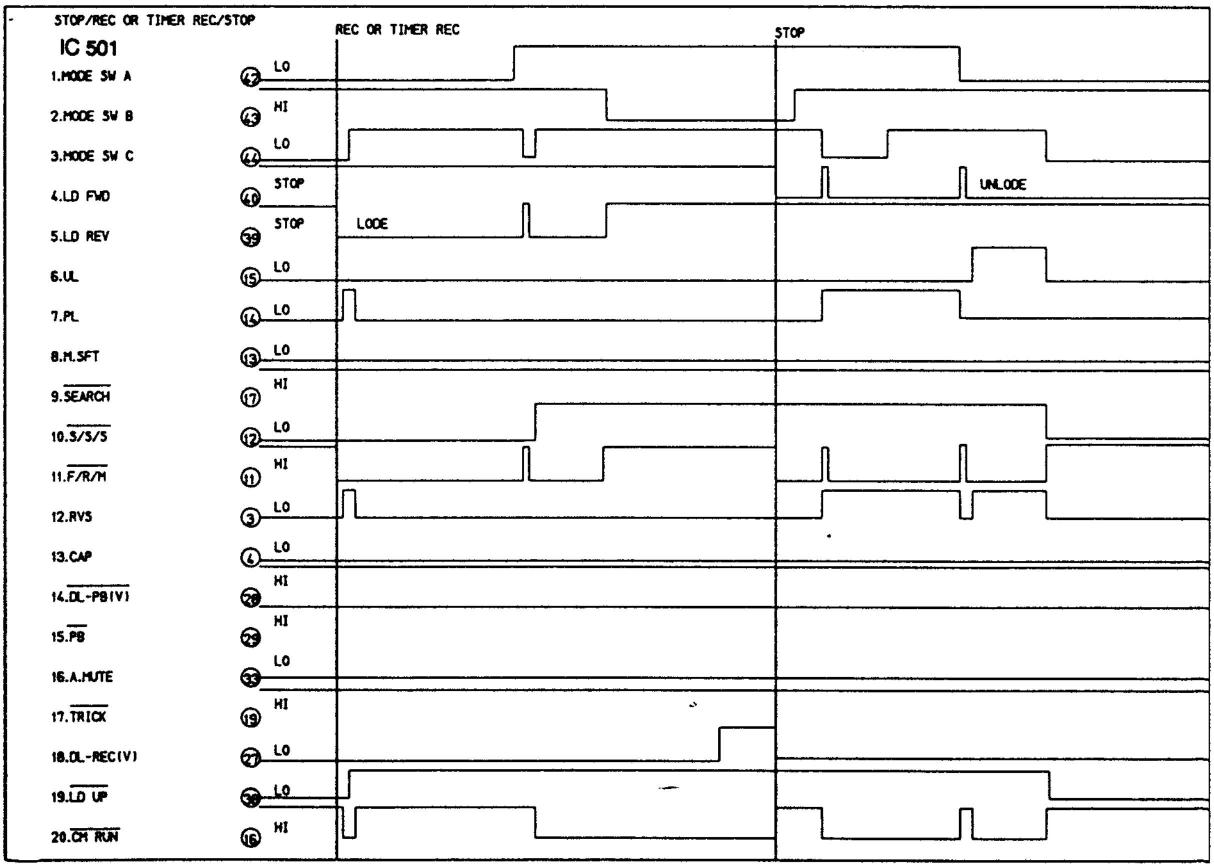

PLAY OR X 2/PAUSE/F.ADV/PLAY OR X 2
IC 501
PAUSE
F.ADV
PLAY OR X 2
1.MODE SW A ㊷ HI
2.MODE SW B ㊸ LO
3.MODE SW C ㊹ HI
4.LD FWD ㊵ STOP
5.LD REV ㊴ STOP
6.UL ⑮ LO
7.PL ⑭ LO
8.M.SFT ⑬ LO
9.SEARCH ⑰ HI
10.S/S/S ⑫ HI
11.F/R/M ⑪ HI
12.RVS ③ LO
13.CAP ④ LO
14.DL-PB(V) ㉖ LO
15.PB ㉙ LO
16.A.MUTE ㉝ LO
17.TRICK ⑲ HI
18.DL-REC(V) ㉗ LO
19.LD UP ㊳ HI
20.CM RUN ⑯ LO


PLAY OR X 2/R.SEARCH/PLAY OR X 2
IC 501
R.SEARCH
PLAY OR X 2
1.MODE SW A ㊷ HI
2.MODE SW B ㊸ LO
3.MODE SW C ㊹ HI
4.LD FWD ㊵ STOP
5.LD REV ㊴ STOP
LOAD
6.UL ⑮ LO
7.PL ⑭ LO
8.M.SFT ⑬ LO
9.SEARCH ⑰ HI
10.S/S/S ⑫ HI
11.F/R/M ⑪ HI
12.RVS ③ LO
13.CAP ④ LO
14.DL-PB(V) ㉖ LO
15.PB ㉙ LO
16.A.MUTE ㉝ LO
17.TRICK ⑲ HI
18.DL-REC(V) ㉗ LO
19.LD UP ㊳ HI
20.CM RUN ⑯ LO

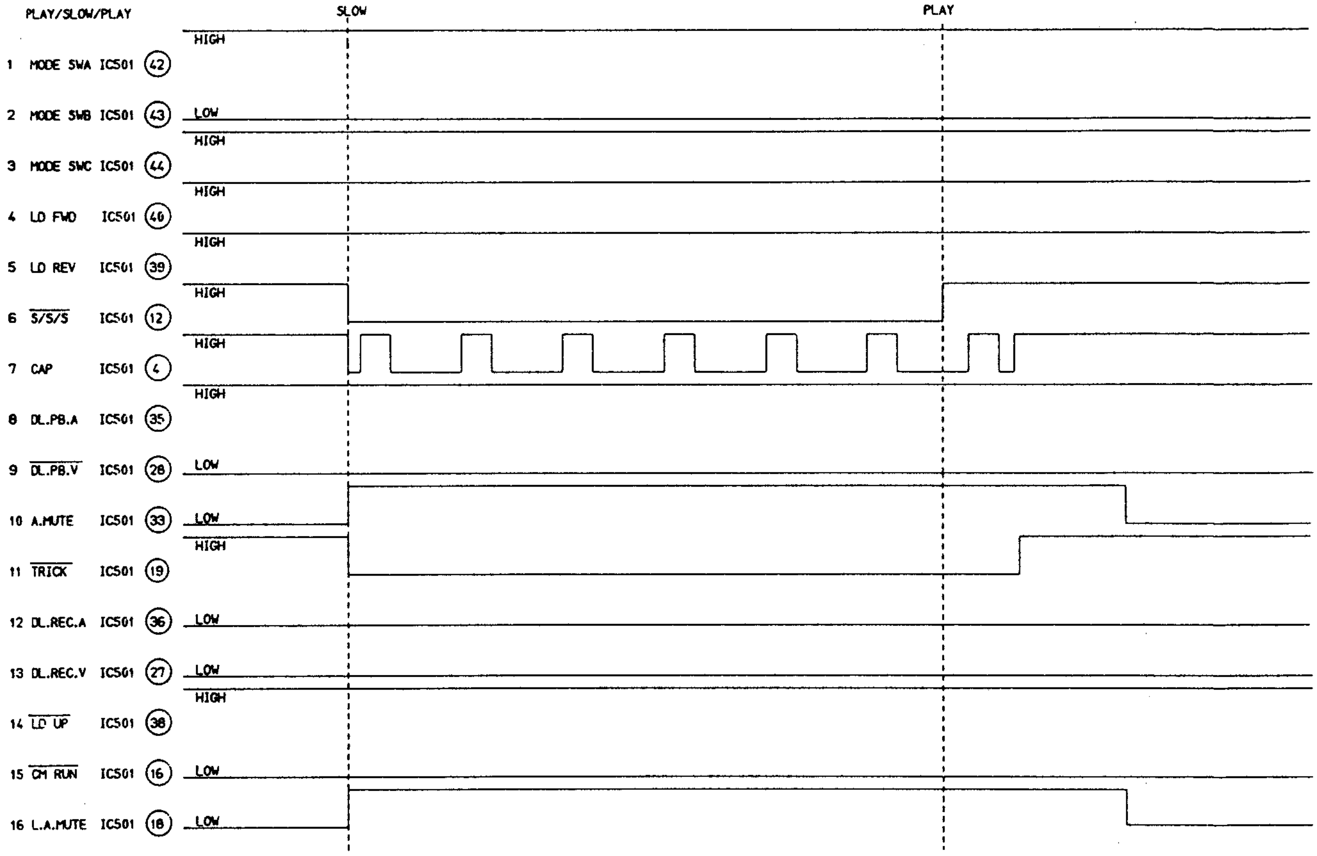

PLAY OR X 2/F.SEARCH/PLAY OR X 2
IC 501
F.SEARCH
PLAY OR X 2
1.MODE SW A ㊷ HI
2.MODE SW B ㊸ LO
3.MODE SW C ㊹ HI
4.LD FWD ㊵ STOP
5.LD REV ㊴ STOP
6.UL ⑮ LO
7.PL ⑭ LO
8.M.SFT ⑬ LO
9.SEARCH ⑰ HI
10.S/S/S ⑫ HI
11.F/R/M ⑪ HI
12.RVS ③ LO
13.CAP ④ LO
14.DL-PB(V) ㉘ LO
15.PB ㉙ LO
16.A.MUTE ㉝ LO
17.TRICK ⑲ HI
18.DL-REC(V) ㉗ LO
19.LD UP ㊳ HI
20.CM RUN ⑯ LO


STOP/REW/STOP
IC 501
REW
STOP
1.MODE SW A ㊷ LO
2.MODE SW B ㊸ HI
3.MODE SW C ㊹ LO
4.LD FWD ㊵ STOP
5.LD REV ㊴ STOP
6.UL ⑮ LO
7.PL ⑭ LO
8.M.SFT ⑬ LO
9.SEARCH ⑰ HI
10.S/S/S ⑫ LO
11.F/R/M ⑪ HI
12.RVS ③ LO
13.CAP ④ LO
14.DL-PB(V) ㉘ HI
15.PB ㉙ HI
16.A.MUTE ㉝ LO
17.TRICK ⑲ HI
18.DL-REC(V) ㉗ LO
19.LD UP ㊳ LO
20.CM RUN ⑯ HI

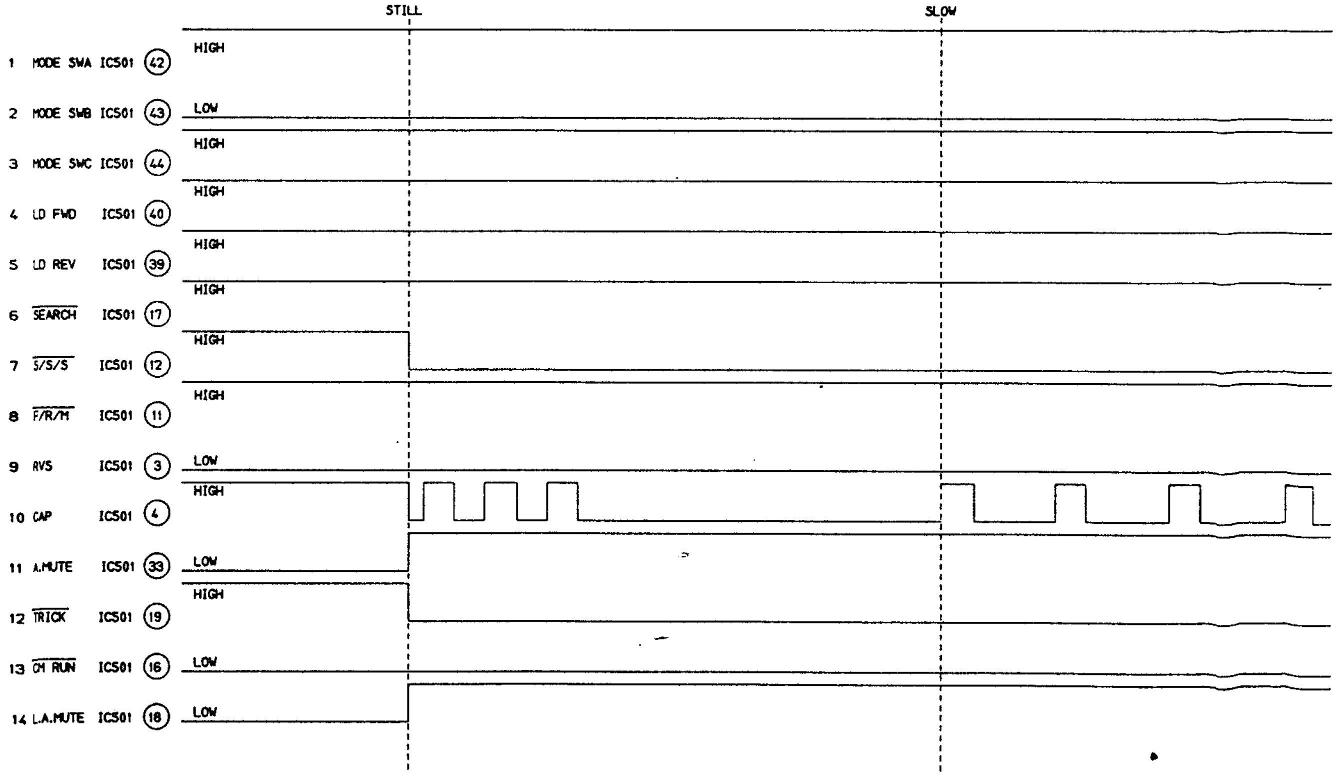

STOP/FF/STOP
IC 501
FF
STOP
1.MODE SW A ㊷ LO
2.MODE SW B ㊸ HI
3.MODE SW C ㊹ LO
4.LD FWD ㊵ STOP
5.LD REV ㊴ STOP
6.UL ⑮ LO
7.PL ⑭ LO
8.M.SFT ⑬ LO
9.SEARCH ⑰ HI
10.S/S/S ⑫ LO
11.F/R/M ⑪ HI
12.RVS ③ LO
13.CAP ④ LO
14.DL-PB(V) ㉘ HI
15.PB ㉙ HI
16.A.MUTE ㉝ LO
17.TRICK ⑲ HI
18.DL-REC(V) ㉗ LO
19.LD UP ㊳ LO
20.CM RUN ⑯ HI

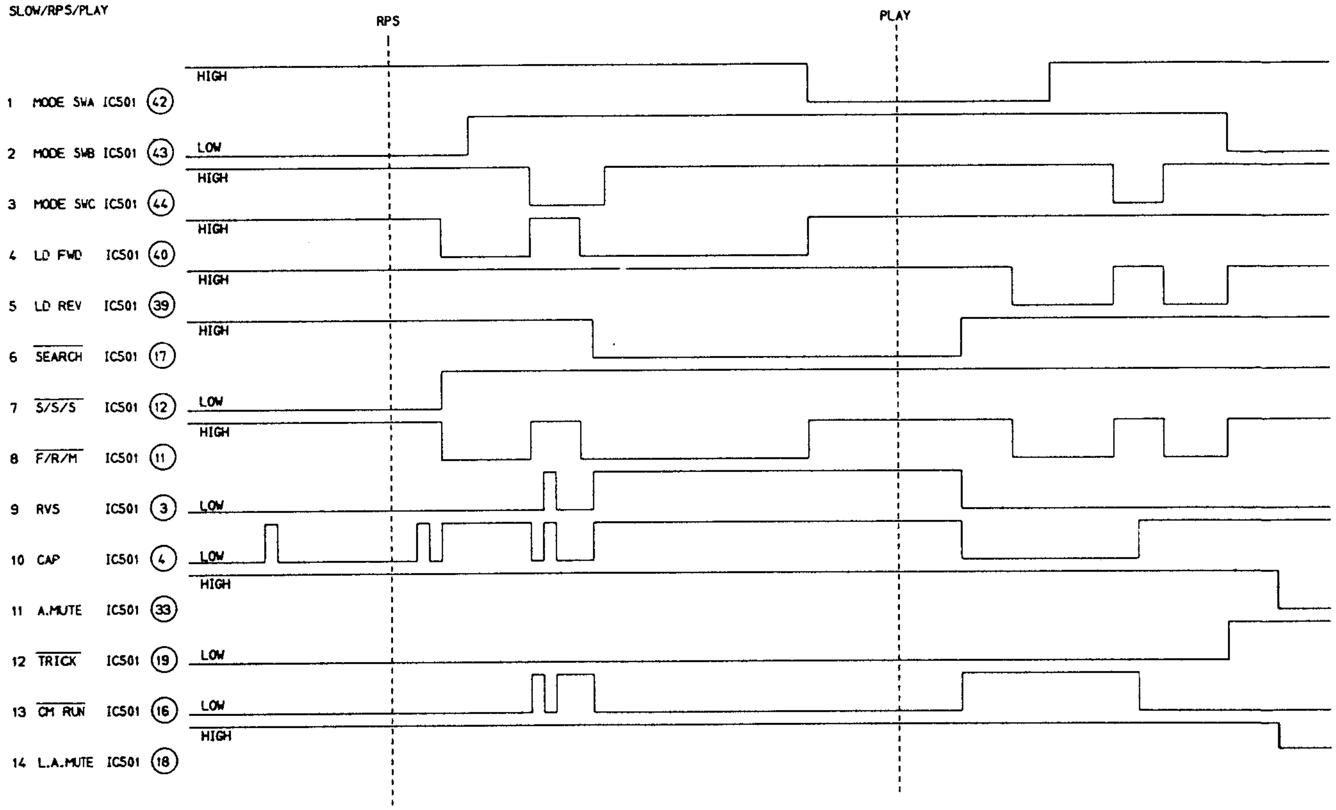

STOP/REC OR TIMER REC/STOP
IC 501
REC OR TIMER REC
STOP
1.MODE SW A ㊷ LO
2.MODE SW B ㊸ HI
3.MODE SW C ㊹ LO
4.LD FWD ㊵ STOP
UNLODE
5.LD REV ㊴ STOP
LODE
6.UL ⑮ LO
7.PL ⑭ LO
8.M.SFT ⑬ LO
9.SEARCH ⑰ HI
10.S/S/S ⑫ LO
11.F/R/M ⑪ HI
12.RVS ③ LO
13.CAP ④ LO
14.DL-PB(V) ㉘ HI
15.PB ㉙ HI
16.A.MUTE ㉝ LO
17.TRICK ⑲ HI
18.DL-REC(V) ㉗ LO
19.LD UP ㊳ LO
20.CM RUN ⑯ HI

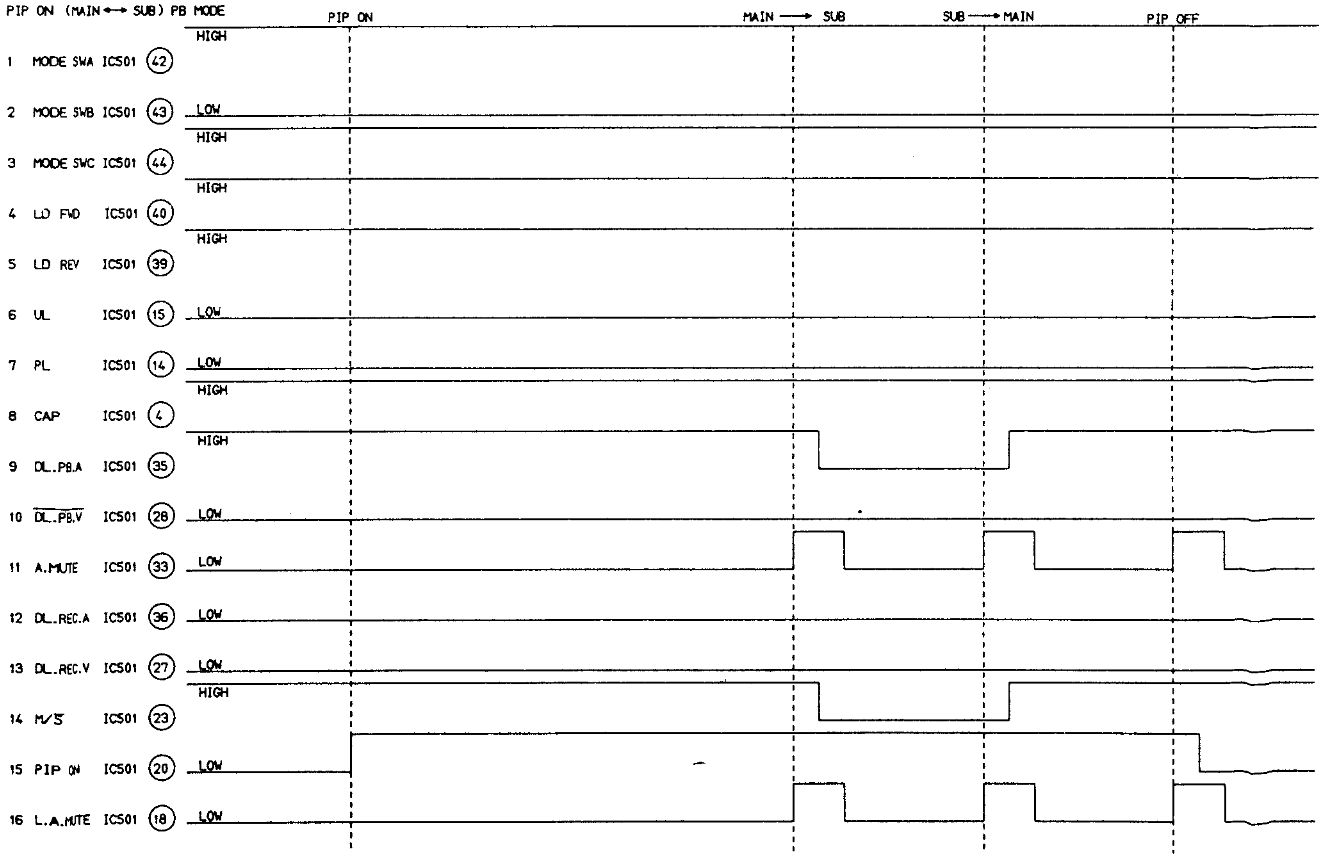
PLAY/SLOW/PLAY


SLOW
PLAY
1 MODE SWA IC501 ㊷
2 MODE SWB IC501 ㊸
3 MODE SWC IC501 ㊹
4 LD FWD IC501 ㊵
5 LD REV IC501 ㊴
6 S/S/S IC501 ⑫
7 CAP IC501 ④
8 DL.PB.A IC501 ㉟
9 DL.PB.V IC501 ㉘
10 A.MUTE IC501 ㉝
11 TRICK IC501 ⑲
12 DL.REC.A IC501 ㊱
13 DL.REC.V IC501 ㉗
14 LD UP IC501 ㊳
15 CH RUN IC501 ⑯
16 L.A.MUTE IC501 ⑱
HIGH
LOW

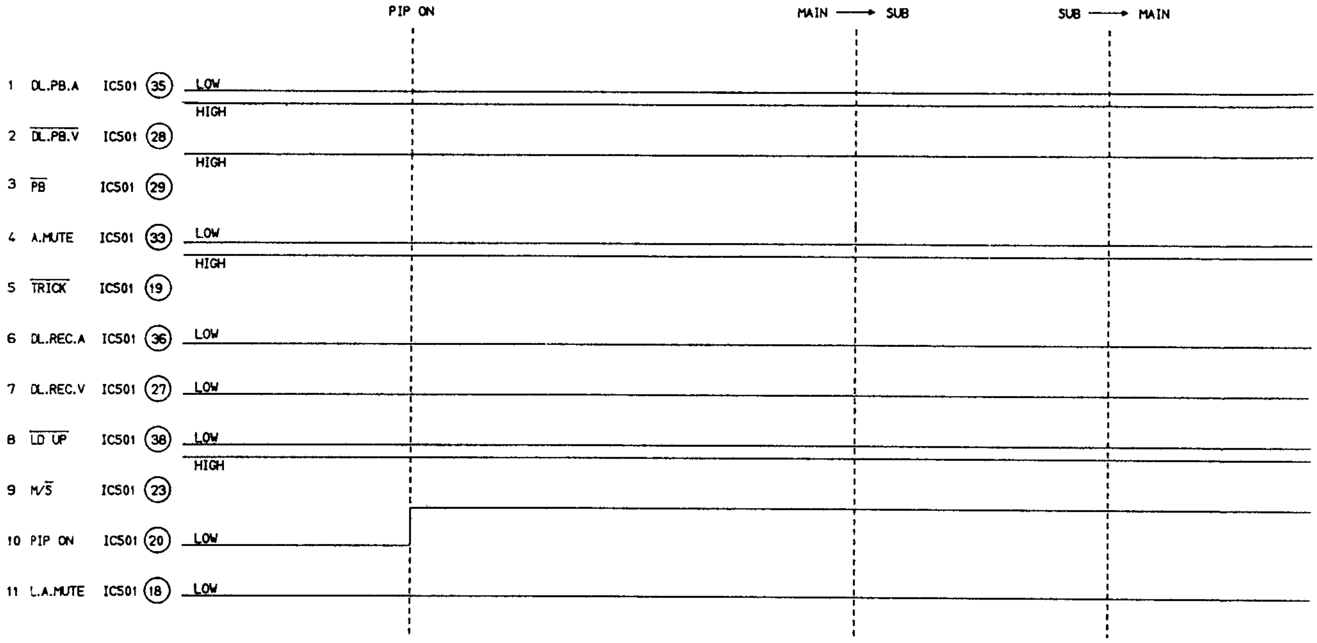
PLAY/STILL/SLOW


STILL
SLOW
1 MODE SWA IC501 ㊷
2 MODE SWB IC501 ㊸
3 MODE SWC IC501 ㊹
4 LD FWD IC501 ㊵
5 LD REV IC501 ㊴
6 SEARCH IC501 ⑰
7 S/S/S IC501 ⑫
8 F/R/M IC501 ⑪
9 RVS IC501 ③
10 CAP IC501 ④
11 A.MUTE IC501 ㉝
12 TRICK IC501 ⑲
13 CH RUN IC501 ⑯
14 L.A.MUTE IC501 ⑱
HIGH
LOW

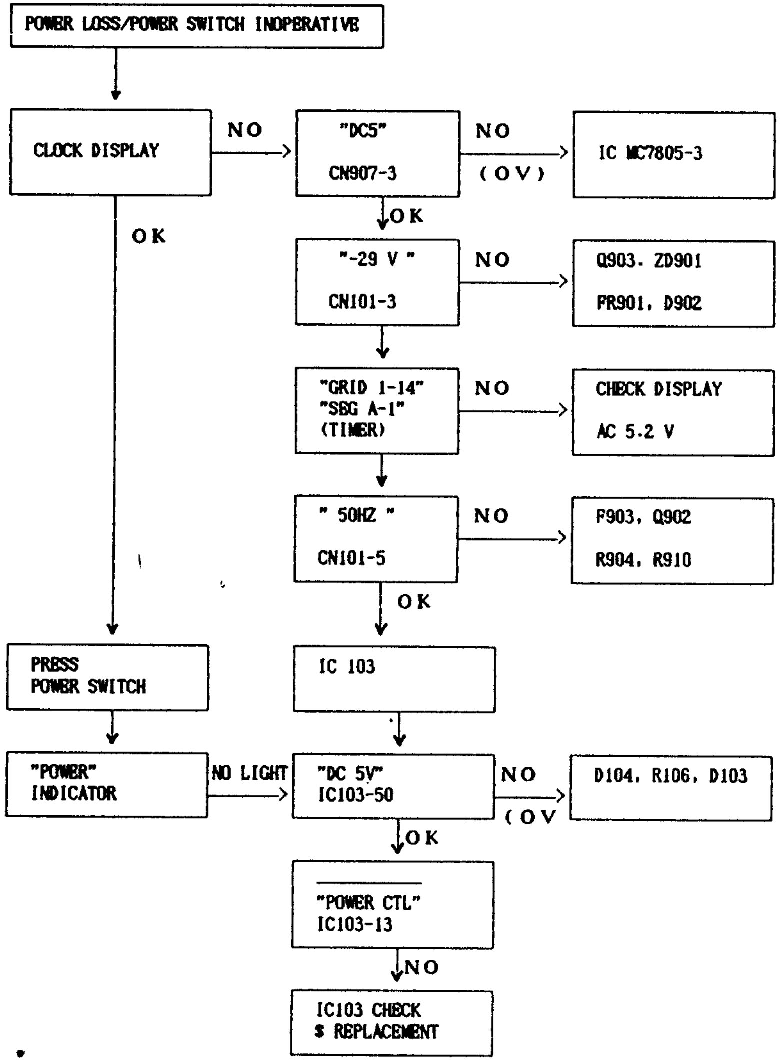

SLOW/RPS/PLAY
RPS
PLAY
HIGH
LOW
1 MODE SWA IC501 (42)
2 MODE SWB IC501 (43)
3 MODE SWC IC501 (44)
4 LD FWD IC501 (40)
5 LD REV IC501 (39)
6 $\overline{\text{SEARCH}}$ IC501 (17)
7 $\overline{\text{S/S/S}}$ IC501 (12)
8 $\overline{\text{F/R/M}}$ IC501 (11)
9 RVS IC501 (3)
10 CAP IC501 (4)
11 A.MUTE IC501 (33)
12 $\overline{\text{TRICK}}$ IC501 (19)
13 $\overline{\text{CM}}$ RUN IC501 (16)
14 L.A.MUTE IC501 (18)

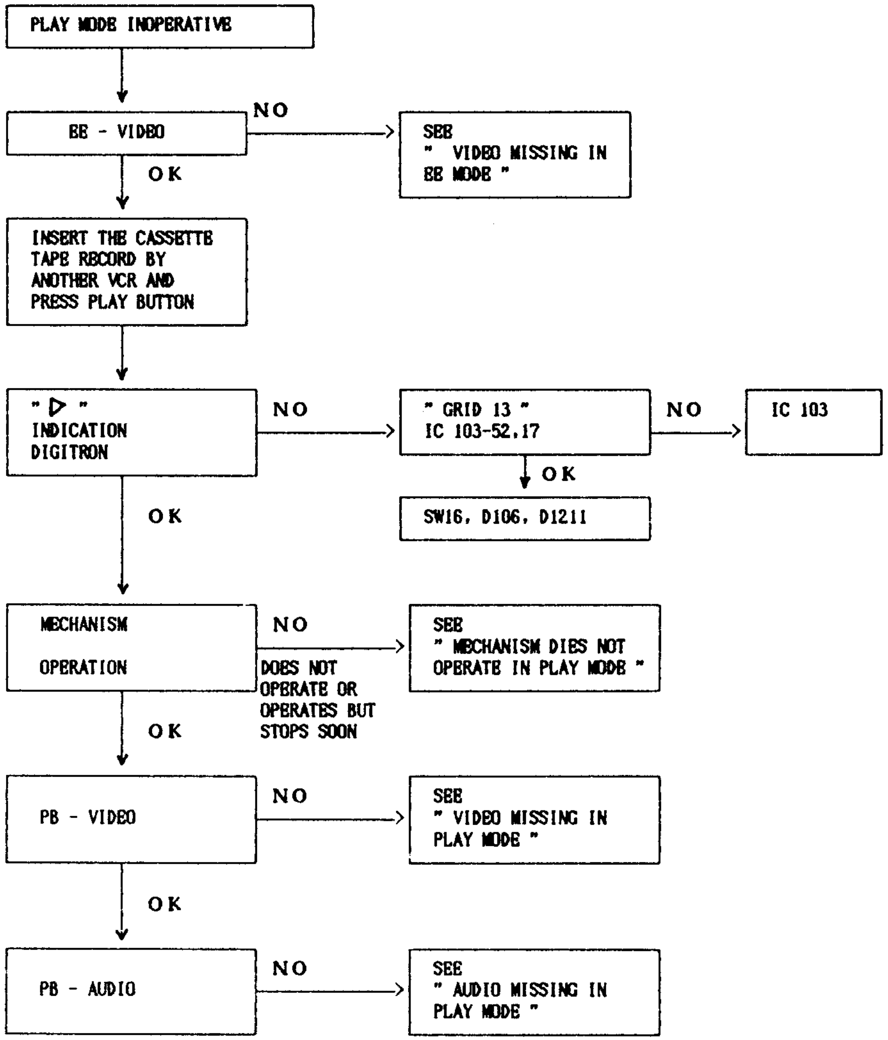

PIP ON (MAIN ↔ SUB) PB MODE
PIP ON
MAIN → SUB
SUB → MAIN
PIP OFF
HIGH
LOW
1 MODE SWA IC501 (42)
2 MODE SWB IC501 (43)
3 MODE SWC IC501 (44)
4 LD FWD IC501 (40)
5 LD REV IC501 (39)
6 UL IC501 (15)
7 PL IC501 (14)
8 CAP IC501 (4)
9 DL.PB.A IC501 (35)
10 $\overline{\text{DL.PB.V}}$ IC501 (28)
11 A.MUTE IC501 (33)
12 DL.REC.A IC501 (36)
13 DL.REC.V IC501 (27)
14 M/$\overline{\text{S}}$ IC501 (23)
15 PIP ON IC501 (20)
16 L.A.MUTE IC501 (18)

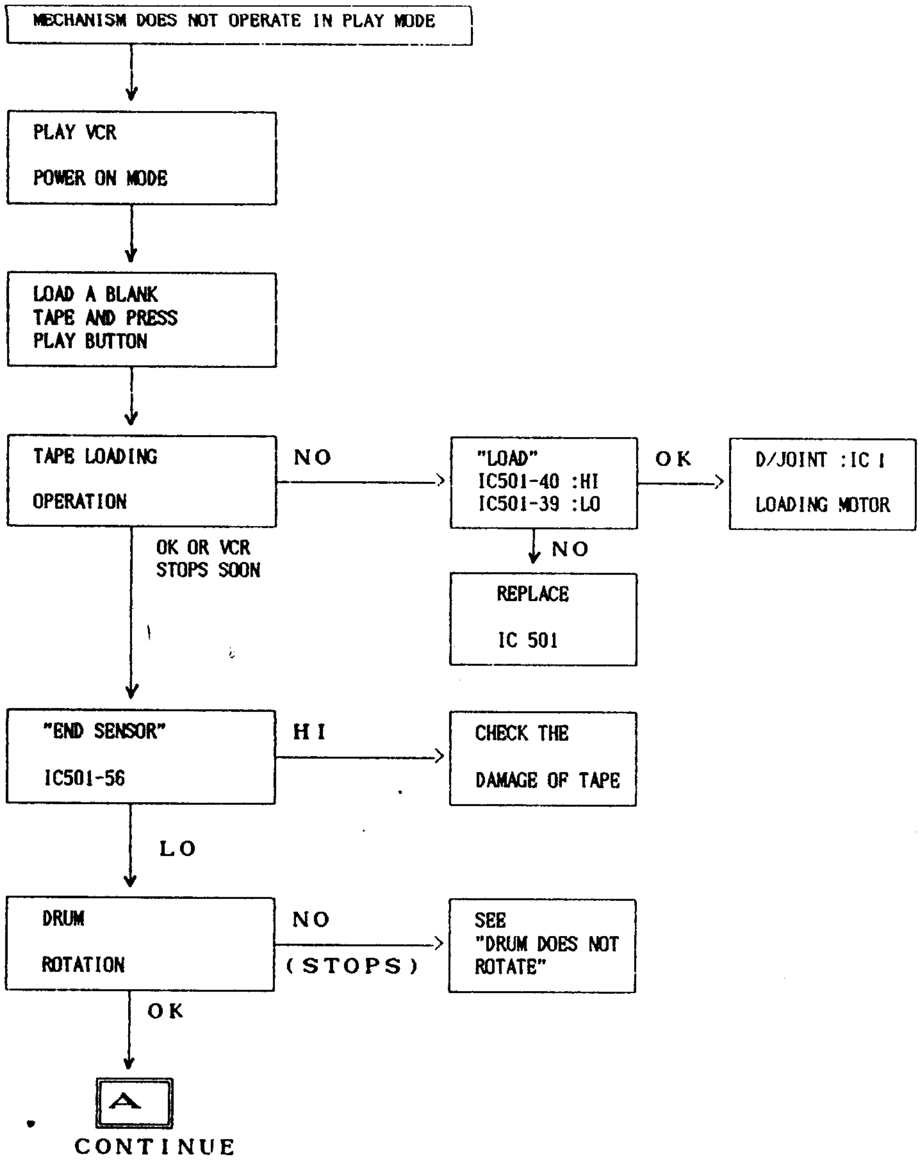
PIP ON (MAIN↔SUB) EE MODE (EJECT.STOP.FF.REW). POWER ON

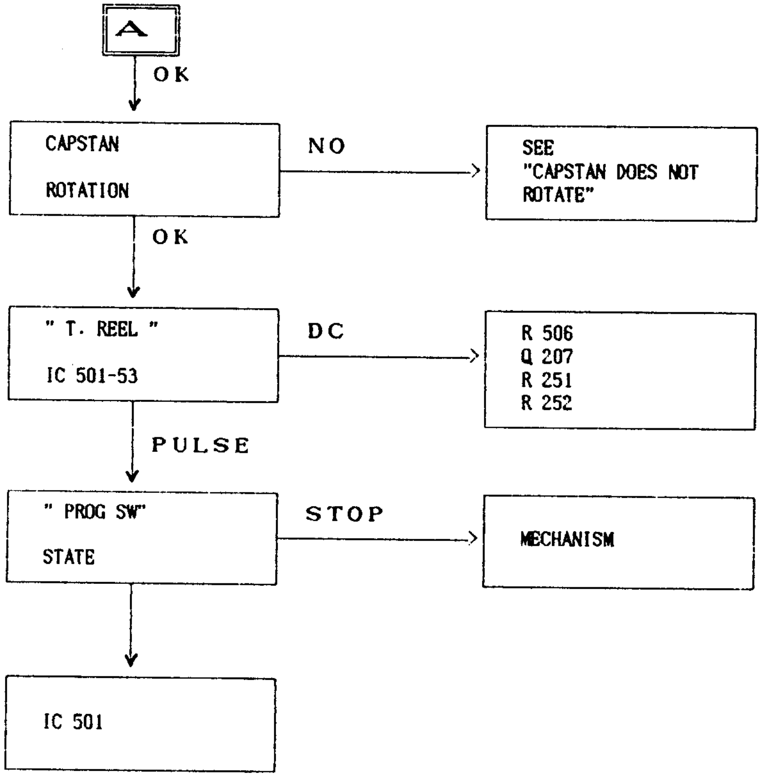

PIP ON
MAIN → SUB
SUB → MAIN
1 DL.PB.A IC501 (35) LOW
2 $\overline{\text{DL.PB.V}}$ IC501 (28) HIGH
3 $\overline{\text{PB}}$ IC501 (29) HIGH
4 A.MUTE IC501 (33) LOW
5 $\overline{\text{TRICK}}$ IC501 (19) HIGH
6 DL.REC.A IC501 (36) LOW
7 DL.REC.V IC501 (27) LOW
8 $\overline{\text{LD}}$ UP IC501 (38) LOW
9 M/$\overline{\text{S}}$ IC501 (23) HIGH
10 PIP ON IC501 (20) LOW
11 L.A.MUTE IC501 (18) LOW

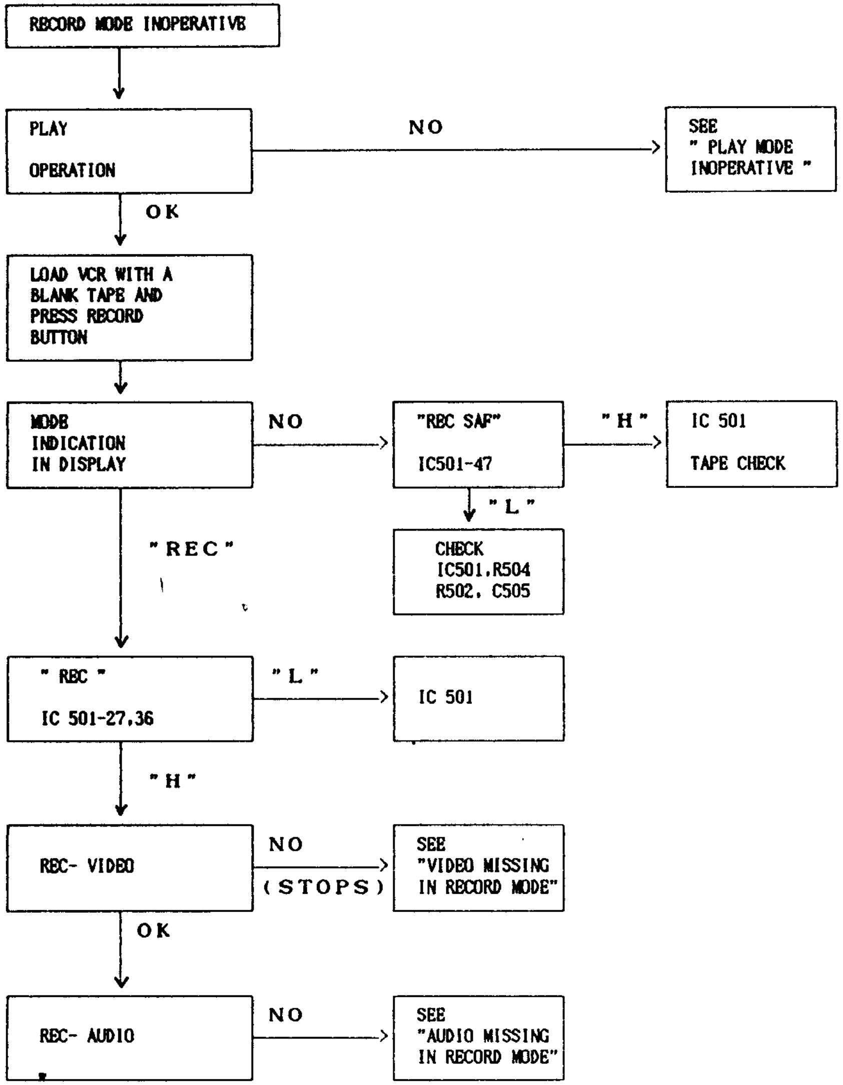
5-2. Troubleshooting Guides

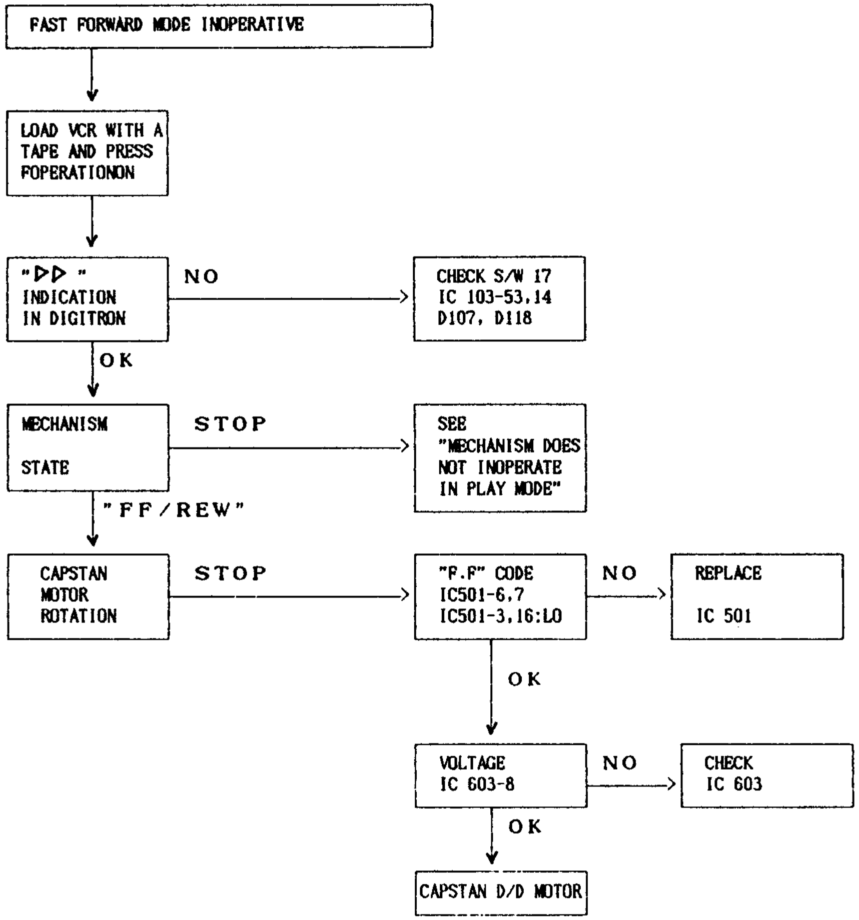

POWER LOSS/POWER SWITCH INOPERATIVE
CLOCK DISPLAY
NO
OK
"DC5"
CN907-3
NO
(OV)
IC MC7805-3
OK
"-29 V"
CN101-3
NO
Q903, ZD901
FR901, D902
"GRID 1-14"
"SEG A-1"
(TIMER)
NO
CHECK DISPLAY
AC 5.2 V
" 50HZ "
CN101-5
NO
F903, Q902
R904, R910
OK
IC 103
PRESS
POWER SWITCH
"POWER"
INDICATOR
NO LIGHT
"DC 5V"
IC103-50
NO
(OV
D104, R106, D103
OK
"POWER CTL"
IC103-13
NO
IC103 CHECK
$ REPLACEMENT

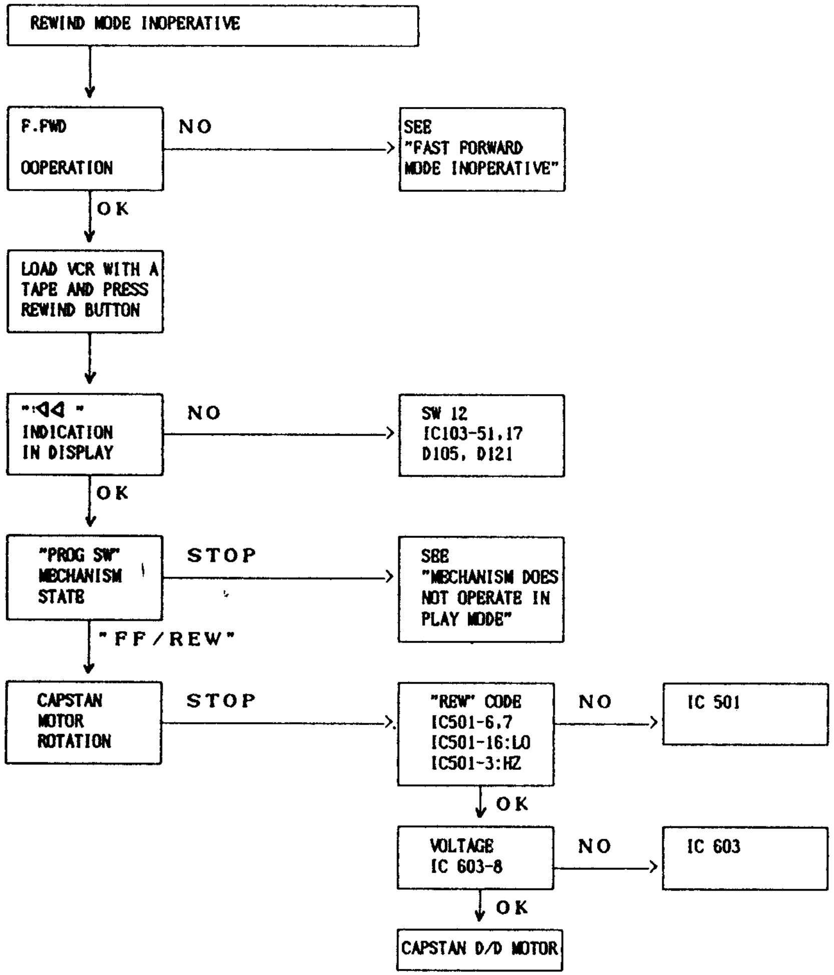

PLAY MODE INOPERATIVE
EE - VIDEO
NO
SEE
" VIDEO MISSING IN
EE MODE "
OK
INSERT THE CASSETTE
TAPE RECORD BY
ANOTHER VCR AND
PRESS PLAY BUTTON
" ▷ "
INDICATION
DIGITRON
NO
" GRID 13 "
IC 103-52,17
NO
IC 103
OK
SW16, D106, D1211
OK
MECHANISM
OPERATION
NO
DOES NOT
OPERATE OR
OPERATES BUT
STOPS SOON
SEE
" MECHANISM DIES NOT
OPERATE IN PLAY MODE "
OK
PB - VIDEO
NO
SEE
" VIDEO MISSING IN
PLAY MODE "
OK
PB - AUDIO
NO
SEE
" AUDIO MISSING IN
PLAY MODE "

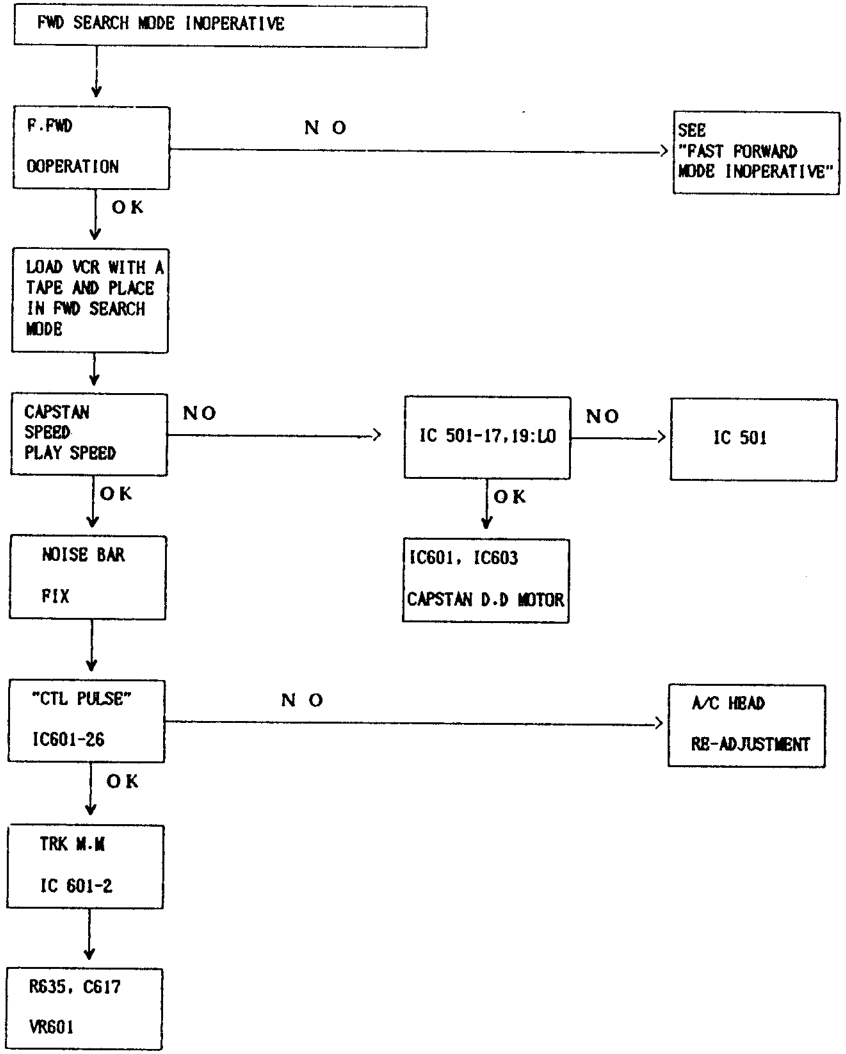

MECHANISM DOES NOT OPERATE IN PLAY MODE
PLAY VCR
POWER ON MODE
LOAD A BLANK TAPE AND PRESS PLAY BUTTON
TAPE LOADING
OPERATION
NO
"LOAD"
IC501-40 :HI
IC501-39 :LO
OK
D/JOINT :IC I
LOADING MOTOR
NO
REPLACE
IC 501
OK OR VCR STOPS SOON
"END SENSOR"
IC501-56
HI
CHECK THE
DAMAGE OF TAPE
LO
DRUM
ROTATION
NO
(STOPS)
SEE "DRUM DOES NOT ROTATE"
OK
A
CONTINUE

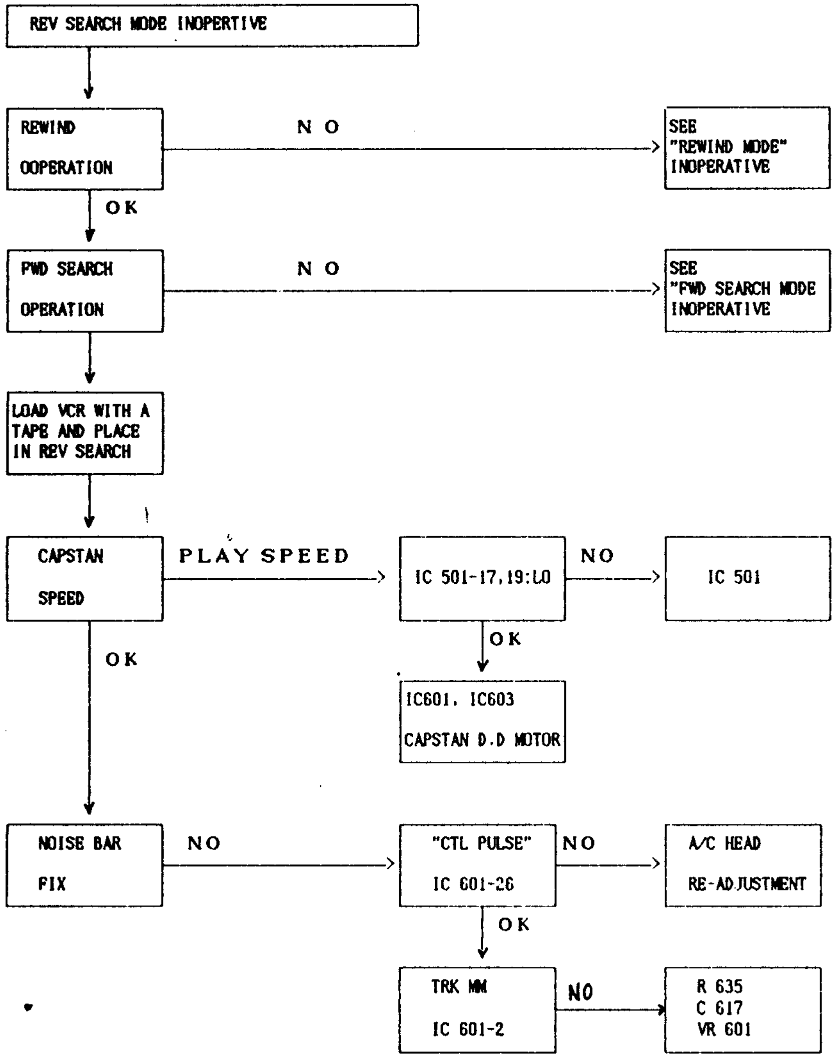

A
OK
CAPSTAN
ROTATION
NO
SEE "CAPSTAN DOES NOT ROTATE"
OK
" T. REEL "
IC 501-53
DC
R 506
Q 207
R 251
R 252
PULSE
" PROG SW"
STATE
STOP
MECHANISM
IC 501

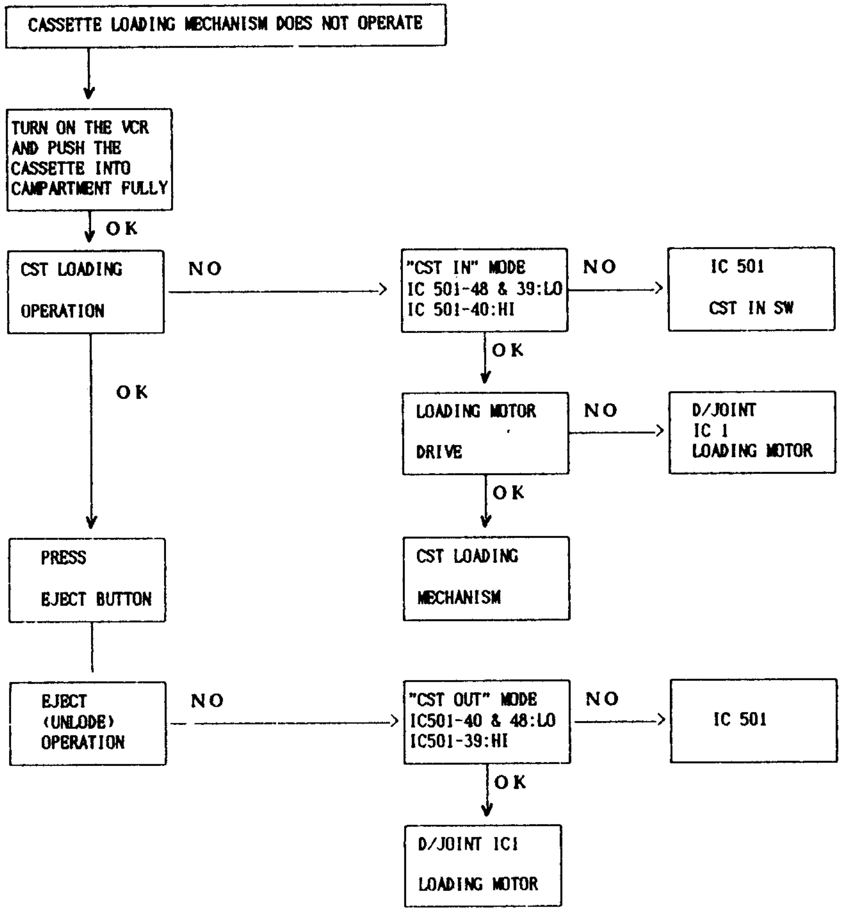

RECORD MODE INOPERATIVE
PLAY OPERATION
NO
SEE " PLAY MODE INOPERATIVE "
OK
LOAD VCR WITH A BLANK TAPE AND PRESS RECORD BUTTON
MODE INDICATION IN DISPLAY
NO
"REC SAF" IC501-47
"H"
IC 501 TAPE CHECK
"L"
CHECK IC501,R504 R502, C505
"REC"
" REC " IC 501-27,36
"L"
IC 501
"H"
REC- VIDEO
NO (STOPS)
SEE "VIDEO MISSING IN RECORD MODE"
OK
REC- AUDIO
NO
SEE "AUDIO MISSING IN RECORD MODE"

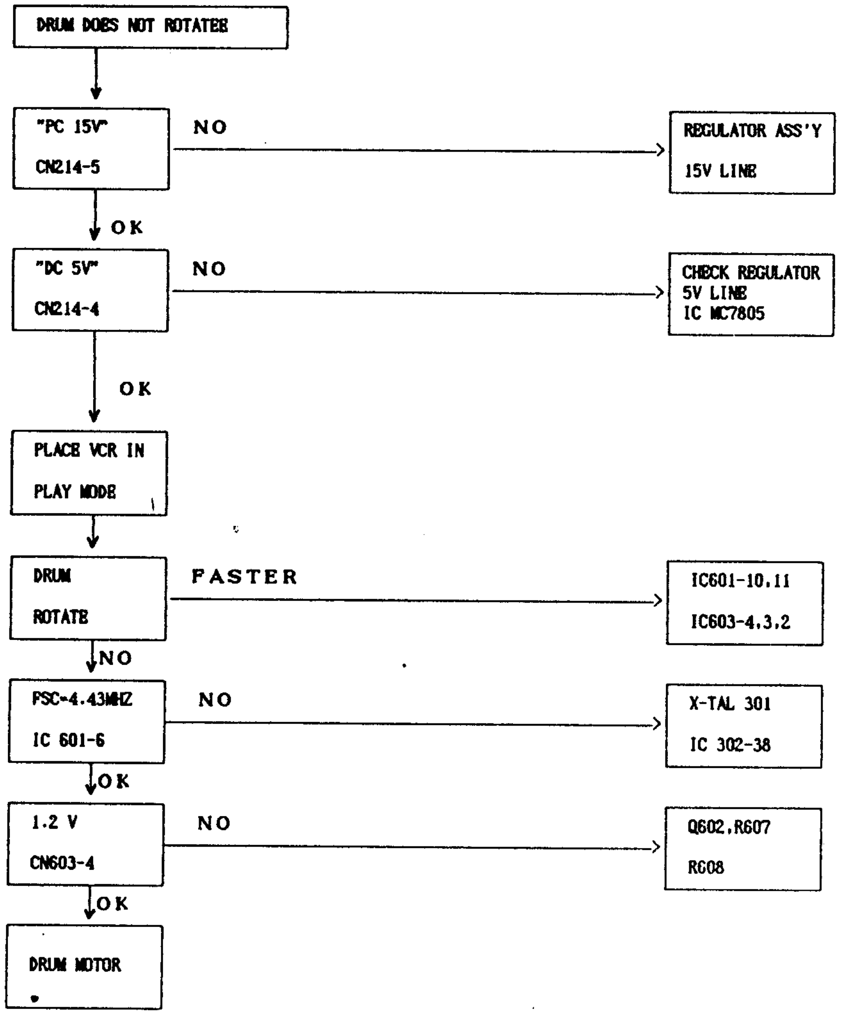

FAST FORWARD MODE INOPERATIVE
LOAD VCR WITH A TAPE AND PRESS FOPERATIONON
"▷▷" INDICATION IN DIGITRON
NO
CHECK S/W 17 IC 103-53,14 D107, D118
OK
MECHANISM STATE
STOP
SEE "MECHANISM DOES NOT INOPERATE IN PLAY MODE"
"FF/REW"
CAPSTAN MOTOR ROTATION
STOP
"F.F" CODE IC501-6,7 IC501-3,16:LO
NO
REPLACE IC 501
OK
VOLTAGE IC 603-8
NO
CHECK IC 603
OK
CAPSTAN D/D MOTOR

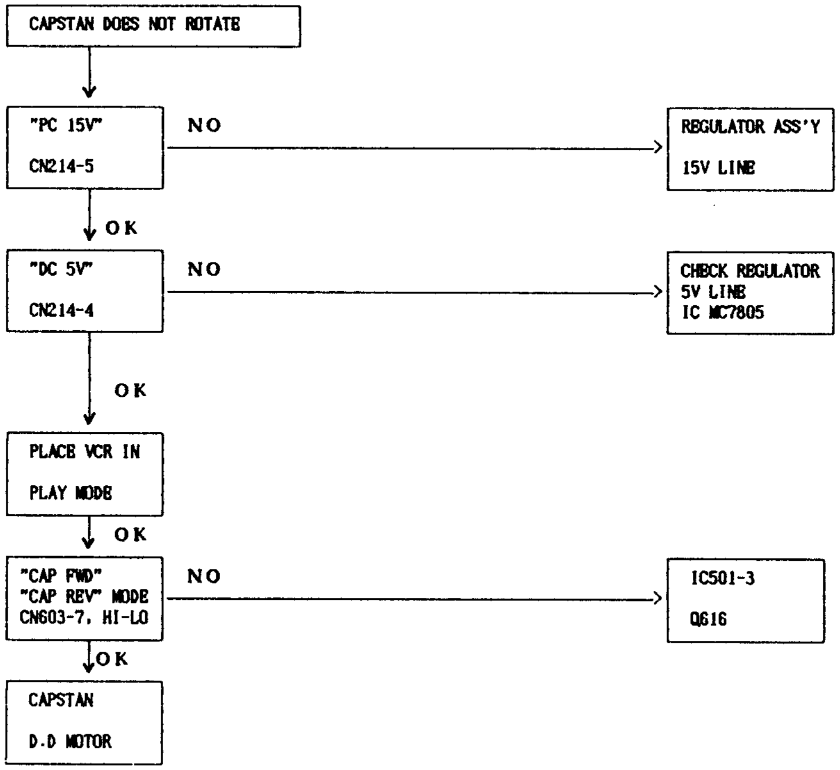

REWIND MODE INOPERATIVE
F.FWD
OOPERATION
NO
SEE
"FAST FORWARD
MODE INOPERATIVE"
OK
LOAD VCR WITH A
TAPE AND PRESS
REWIND BUTTON
":◁◁ "
INDICATION
IN DISPLAY
NO
SW 12
IC103-51,17
D105, D121
OK
"PROG SW"
MECHANISM
STATE
STOP
SEE
"MECHANISM DOES
NOT OPERATE IN
PLAY MODE"
"FF/REW"
CAPSTAN
MOTOR
ROTATION
STOP
"REW" CODE
IC501-6,7
IC501-16:LO
IC501-3:HZ
NO
IC 501
OK
VOLTAGE
IC 603-8
NO
IC 603
OK
CAPSTAN D/D MOTOR

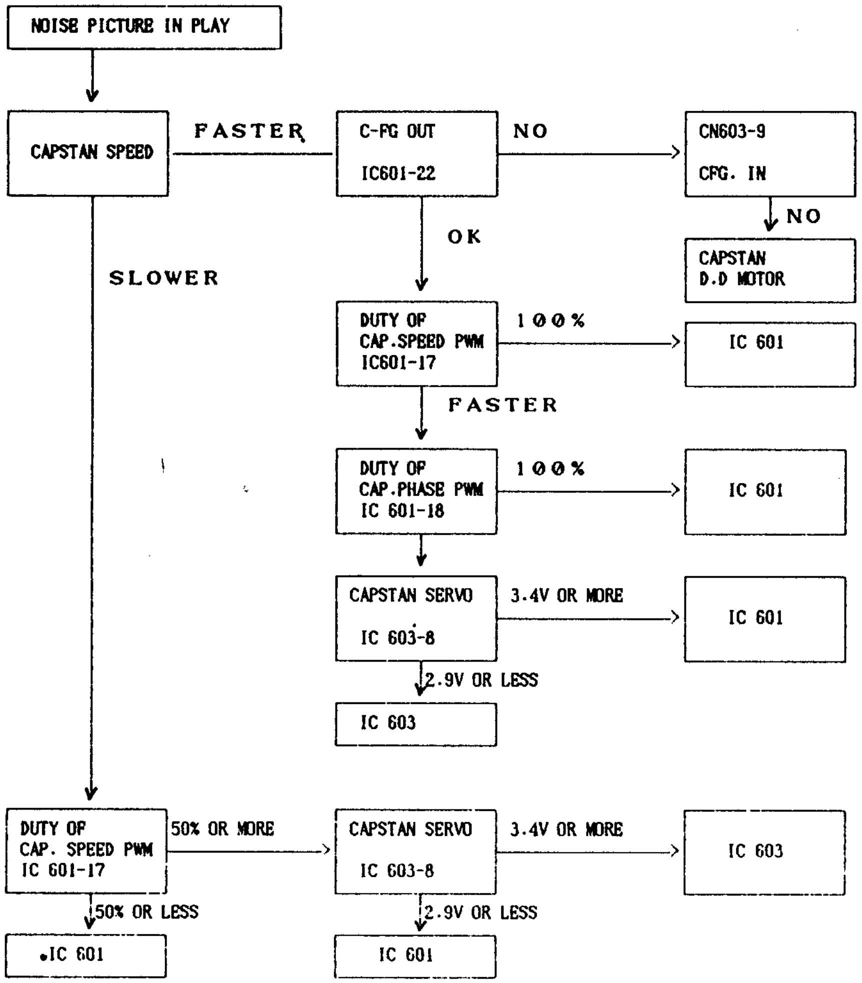

FWD SEARCH MODE INOPERATIVE
F.FWD
OOPERATION
N O
SEE
"FAST FORWARD
MODE INOPERATIVE"
OK
LOAD VCR WITH A
TAPE AND PLACE
IN FWD SEARCH
MODE
CAPSTAN
SPEED
PLAY SPEED
NO
IC 501-17,19:LO
NO
IC 501
OK
IC601, IC603
CAPSTAN D.D MOTOR
OK
NOISE BAR
FIX
"CTL PULSE"
IC601-26
N O
A/C HEAD
RE-ADJUSTMENT
OK
TRK M.M
IC 601-2
R635, C617
VR601

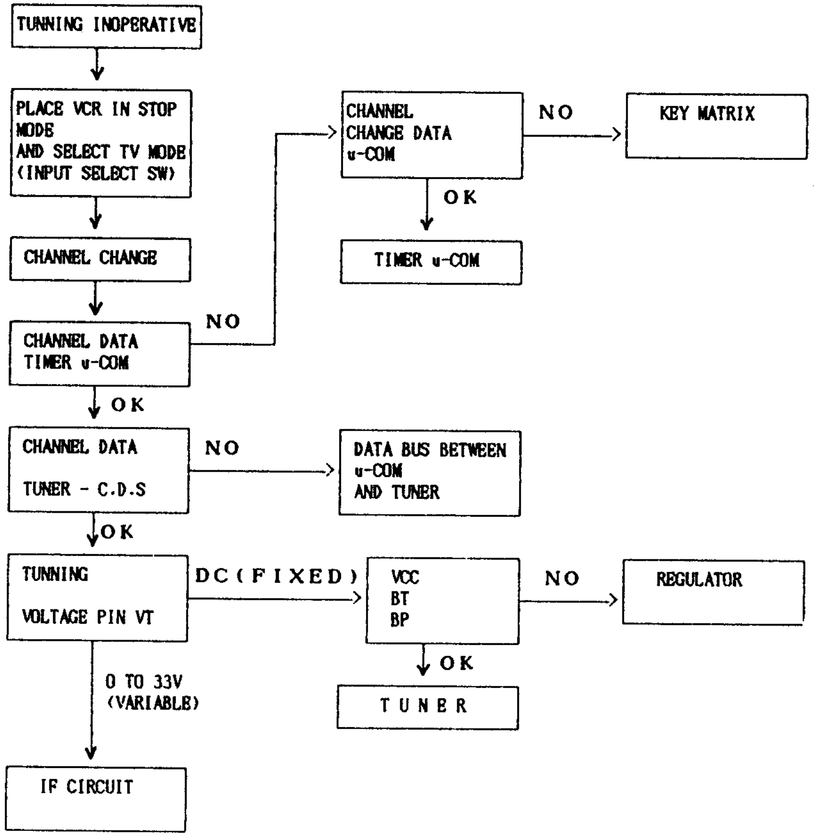

REV SEARCH MODE INOPERTIVE
REWIND OOPERATION
N O
SEE "REWIND MODE" INOPERATIVE
OK
PWD SEARCH OPERATION
N O
SEE "FWD SEARCH MODE INOPERATIVE
LOAD VCR WITH A TAPE AND PLACE IN REV SEARCH
CAPSTAN SPEED
PLAY SPEED
IC 501-17,19:LO
NO
IC 501
OK
IC601, IC603 CAPSTAN D.D MOTOR
OK
NOISE BAR FIX
NO
"CTL PULSE" IC 601-26
NO
A/C HEAD RE-ADJUSTMENT
OK
TRK MM IC 601-2
NO
R 635
C 617
VR 601

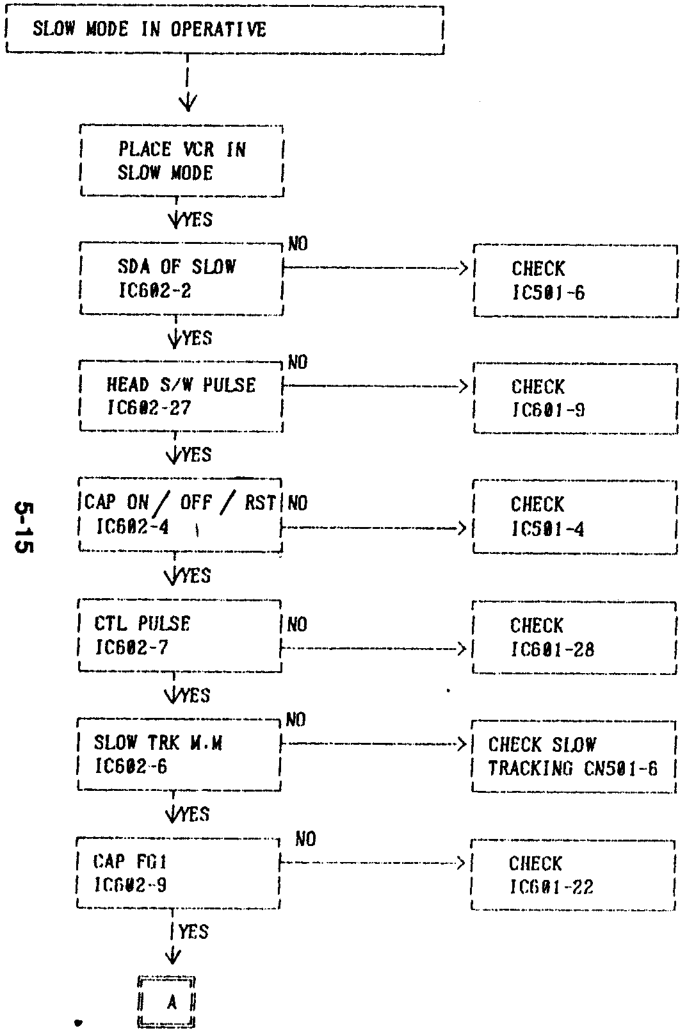

CASSETTE LOADING MECHANISM DOES NOT OPERATE
TURN ON THE VCR AND PUSH THE CASSETTE INTO CAMPARTMENT FULLY
OK
CST LOADING OPERATION
NO
"CST IN" MODE
IC 501-48 & 39:LO
IC 501-40:HI
NO
IC 501 CST IN SW
OK
OK
LOADING MOTOR DRIVE
NO
D/JOINT IC 1 LOADING MOTOR
OK
PRESS EJECT BUTTON
CST LOADING MECHANISM
EJECT (UNLODE) OPERATION
NO
"CST OUT" MODE
IC501-40 & 48:LO
IC501-39:HI
NO
IC 501
OK
D/JOINT IC1 LOADING MOTOR

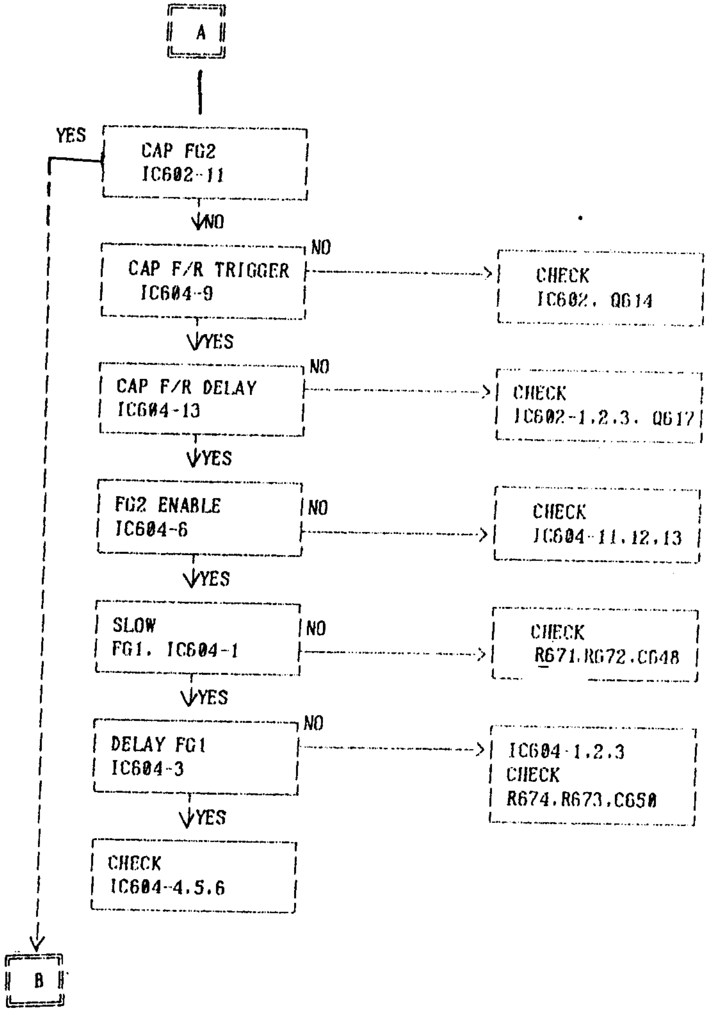

DRUM DOES NOT ROTATES
"PC 15V"
CN214-5
NO
REGULATOR ASS'Y
15V LINE
OK
"DC 5V"
CN214-4
NO
CHECK REGULATOR
5V LINE
IC MC7805
OK
PLACE VCR IN
PLAY MODE
DRUM
ROTATE
FASTER
IC601-10,11
IC603-4,3,2
NO
FSC=4.43MHZ
IC 601-6
NO
X-TAL 301
IC 302-38
OK
1.2 V
CN603-4
NO
Q602,R607
R608
OK
DRUM MOTOR

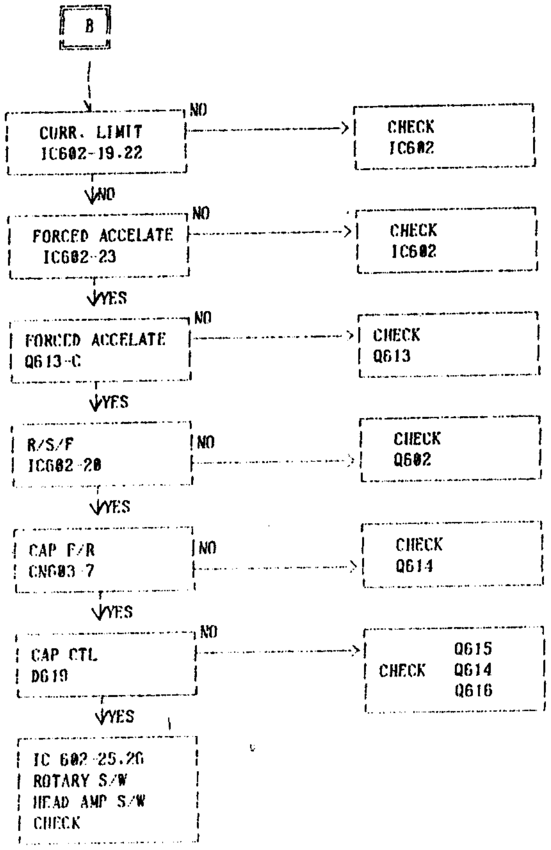

CAPSTAN DOES NOT ROTATE
"PC 15V"
CN214-5
NO
REGULATOR ASS'Y
15V LINE
OK
"DC 5V"
CN214-4
NO
CHECK REGULATOR
5V LINE
IC MC7805
OK
PLACE VCR IN
PLAY MODE
OK
"CAP FWD"
"CAP REV" MODE
CN603-7, HI-LO
NO
IC501-3
Q616
OK
CAPSTAN
D.D MOTOR

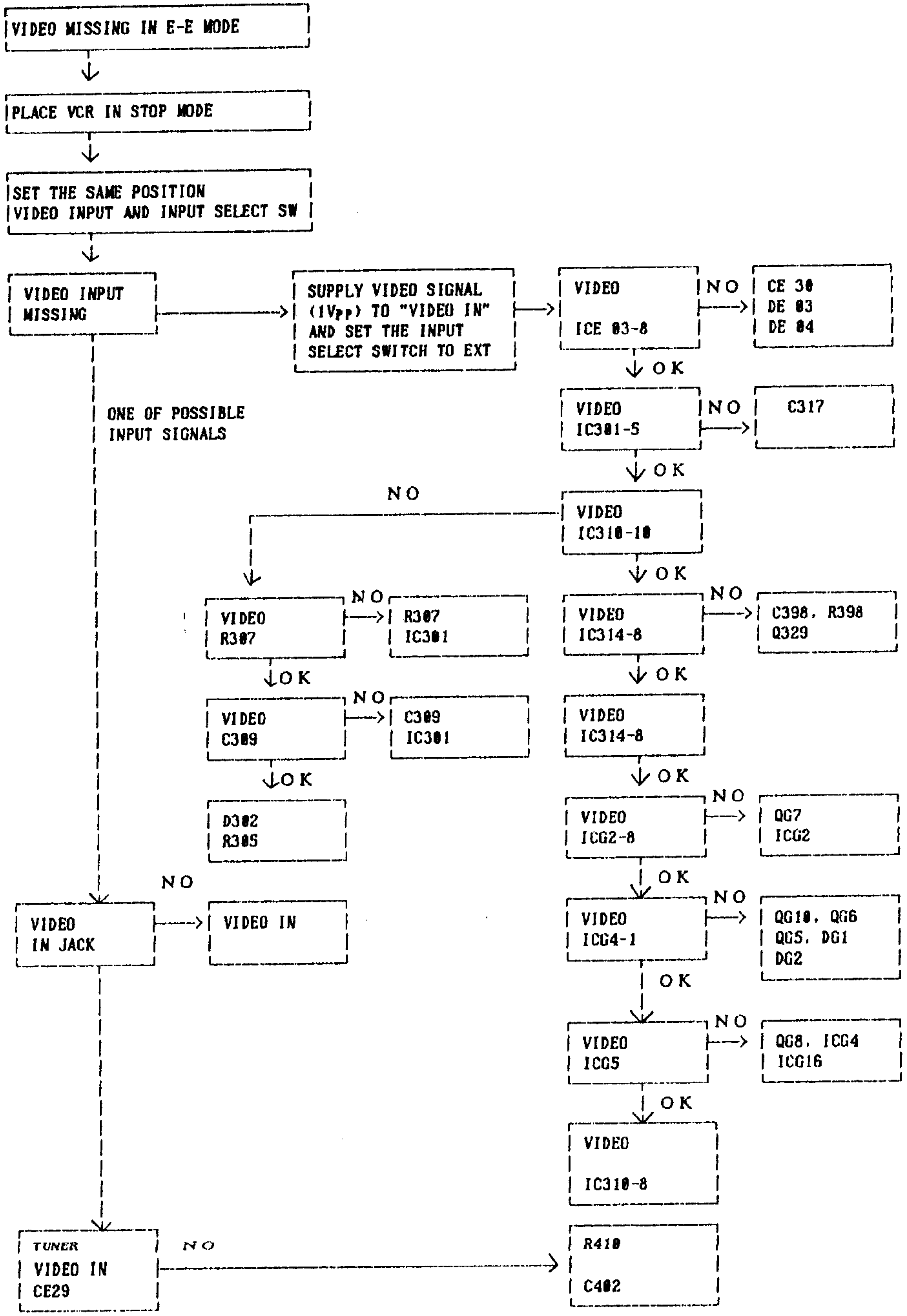

NOISE PICTURE IN PLAY
CAPSTAN SPEED
FASTER
C-FG OUT
IC601-22
NO
CN603-9
CFG. IN
NO
CAPSTAN
D.D MOTOR
OK
SLOWER
DUTY OF
CAP.SPEED PWM
IC601-17
100%
IC 601
FASTER
DUTY OF
CAP.PHASE PWM
IC 601-18
100%
IC 601
CAPSTAN SERVO
IC 603-8
3.4V OR MORE
IC 601
2.9V OR LESS
IC 603
DUTY OF
CAP. SPEED PWM
IC 601-17
50% OR MORE
CAPSTAN SERVO
IC 603-8
3.4V OR MORE
IC 603
50% OR LESS
IC 601
2.9V OR LESS
IC 601

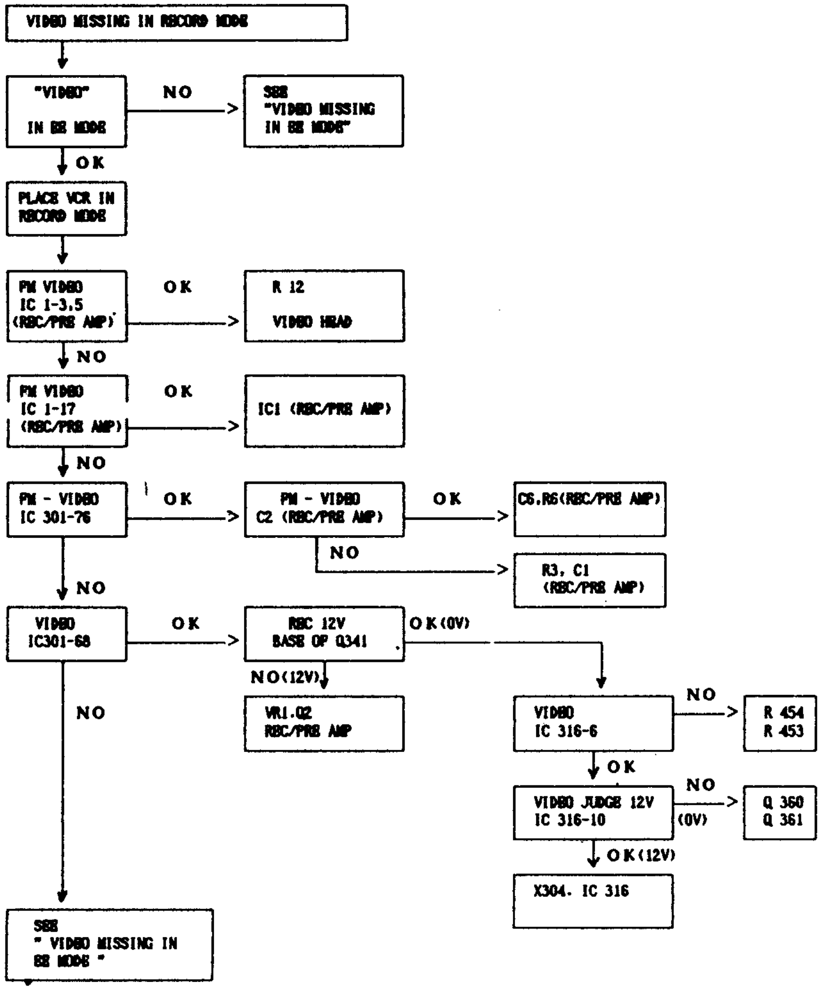

TUNNING INOPERATIVE
PLACE VCR IN STOP
MODE
AND SELECT TV MODE
(INPUT SELECT SW)
CHANNEL CHANGE
CHANNEL DATA
TIMER u-COM
NO
CHANNEL
CHANGE DATA
u-COM
NO
KEY MATRIX
OK
TIMER u-COM
OK
CHANNEL DATA
TUNER - C.D.S
NO
DATA BUS BETWEEN
u-COM
AND TUNER
OK
TUNNING
VOLTAGE PIN VT
DC(FIXED)
VCC
BT
BP
NO
REGULATOR
OK
TUNER
0 TO 33V
(VARIABLE)
IF CIRCUIT

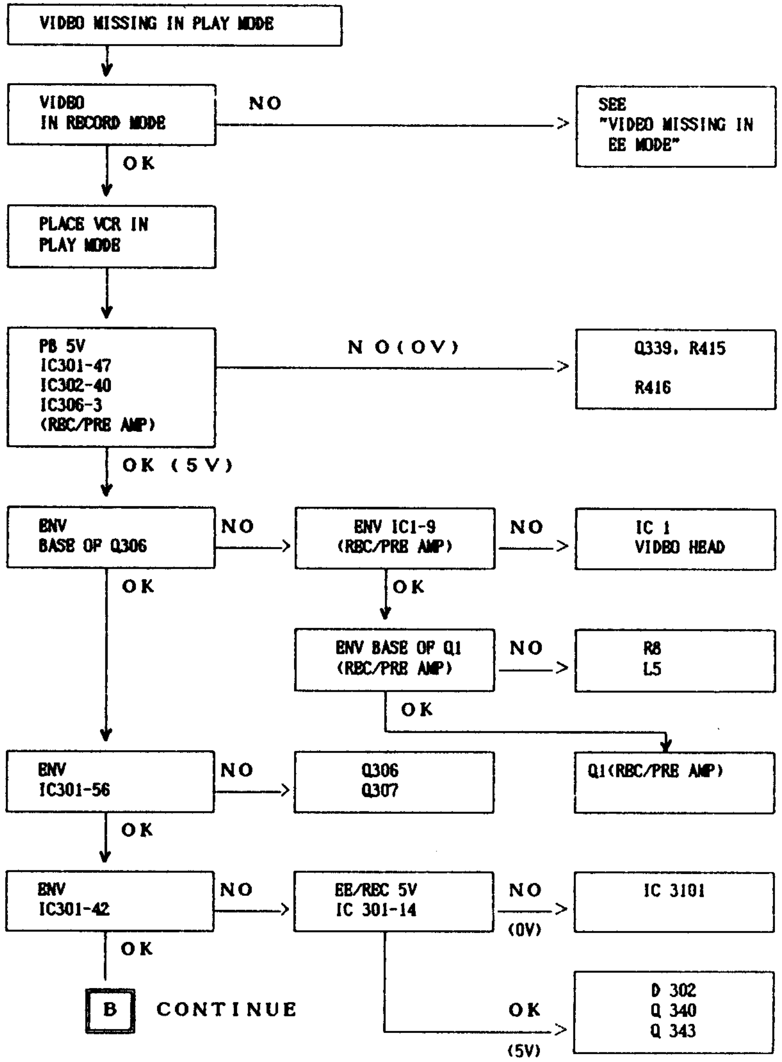

SLOW MODE IN OPERATIVE
PLACE VCR IN SLOW MODE
YES
SDA OF SLOW IC602-2
NO
CHECK IC501-6
YES
HEAD S/W PULSE IC602-27
NO
CHECK IC601-9
YES
CAP ON / OFF / RST IC602-4
NO
CHECK IC501-4
YES
CTL PULSE IC602-7
NO
CHECK IC601-28
YES
SLOW TRK M.M IC602-6
NO
CHECK SLOW TRACKING CN501-6
YES
CAP FG1 IC602-9
NO
CHECK IC601-22
YES
A

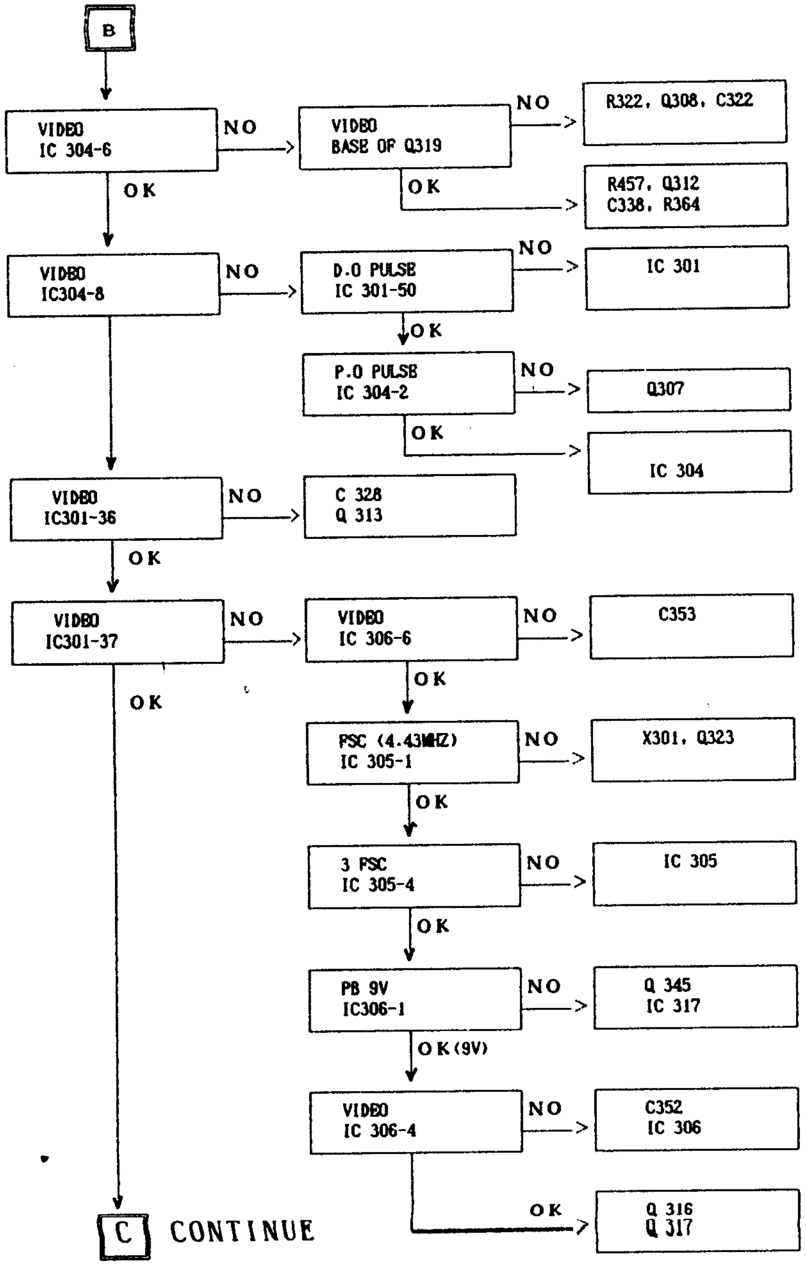

A
YES
CAP FG2 IC602-11
NO
CAP F/R TRIGGER IC604-9
NO
CHECK IC602, Q614
YES
CAP F/R DELAY IC604-13
NO
CHECK IC602-1,2,3, Q617
YES
FG2 ENABLE IC604-6
NO
CHECK IC604-11,12,13
YES
SLOW FG1, IC604-1
NO
CHECK R671,R672,C648
YES
DELAY FG1 IC604-3
NO
IC604-1,2,3 CHECK R674,R673,C650
YES
CHECK IC604-4,5,6
B

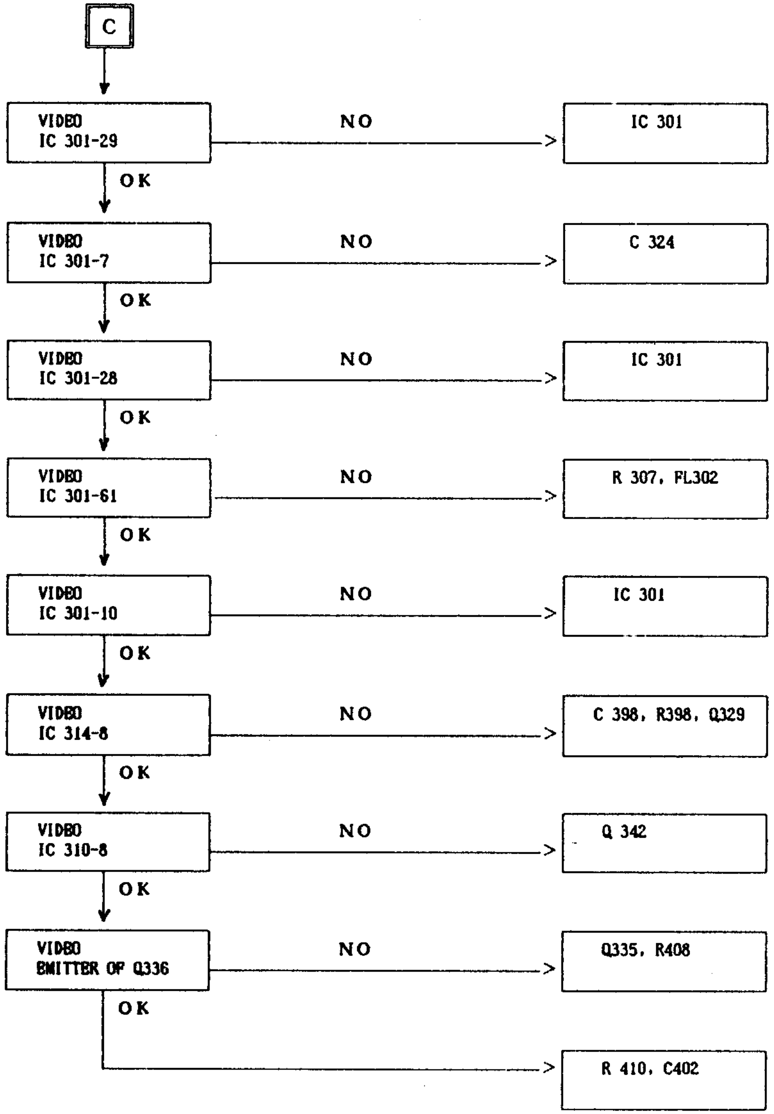

B
CURR. LIMIT IC602-19.22
NO
CHECK IC602
NO
FORCED ACCELATE IC602-23
NO
CHECK IC602
YES
FORCED ACCELATE Q613-C
NO
CHECK Q613
YES
R/S/F IC602-20
NO
CHECK Q602
YES
CAP F/R CN603-7
NO
CHECK Q614
YES
CAP CTL DG19
NO
CHECK Q615 Q614 Q616
YES
IC 602-25.26 ROTARY S/W HEAD AMP S/W CHECK

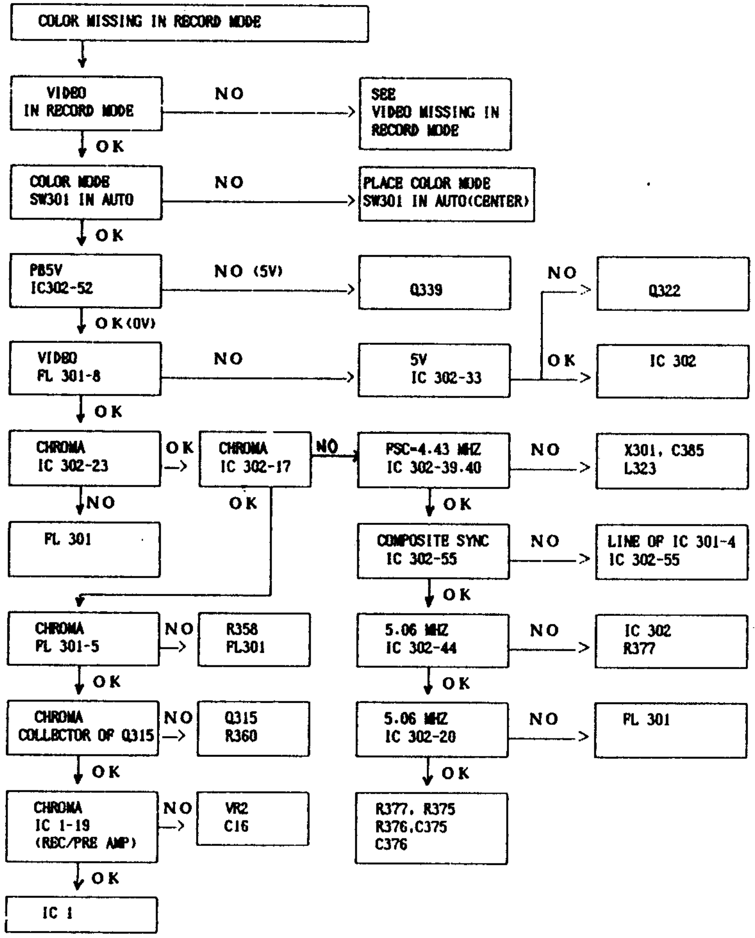

VIDEO MISSING IN E-E MODE
PLACE VCR IN STOP MODE
SET THE SAME POSITION VIDEO INPUT AND INPUT SELECT SW
VIDEO INPUT MISSING
SUPPLY VIDEO SIGNAL (1Vpp) TO "VIDEO IN" AND SET THE INPUT SELECT SWITCH TO EXT
VIDEO ICE 03-8
NO
CE 30 DE 03 DE 04
OK
VIDEO IC301-5
NO
C317
OK
ONE OF POSSIBLE INPUT SIGNALS
NO
VIDEO IC310-10
OK
VIDEO R307
NO
R307 IC301
OK
VIDEO C309
NO
C309 IC301
OK
D302 R305
VIDEO IC314-8
NO
C398, R398 Q329
OK
VIDEO IC314-8
OK
VIDEO ICG2-8
NO
QG7 ICG2
OK
VIDEO ICG4-1
NO
QG10, QG6 QGS, DG1 DG2
OK
VIDEO ICG5
NO
QG8, ICG4 ICG16
OK
VIDEO IC310-8
NO
VIDEO IN JACK
VIDEO IN
TUNER VIDEO IN CE29
NO
R410 C402

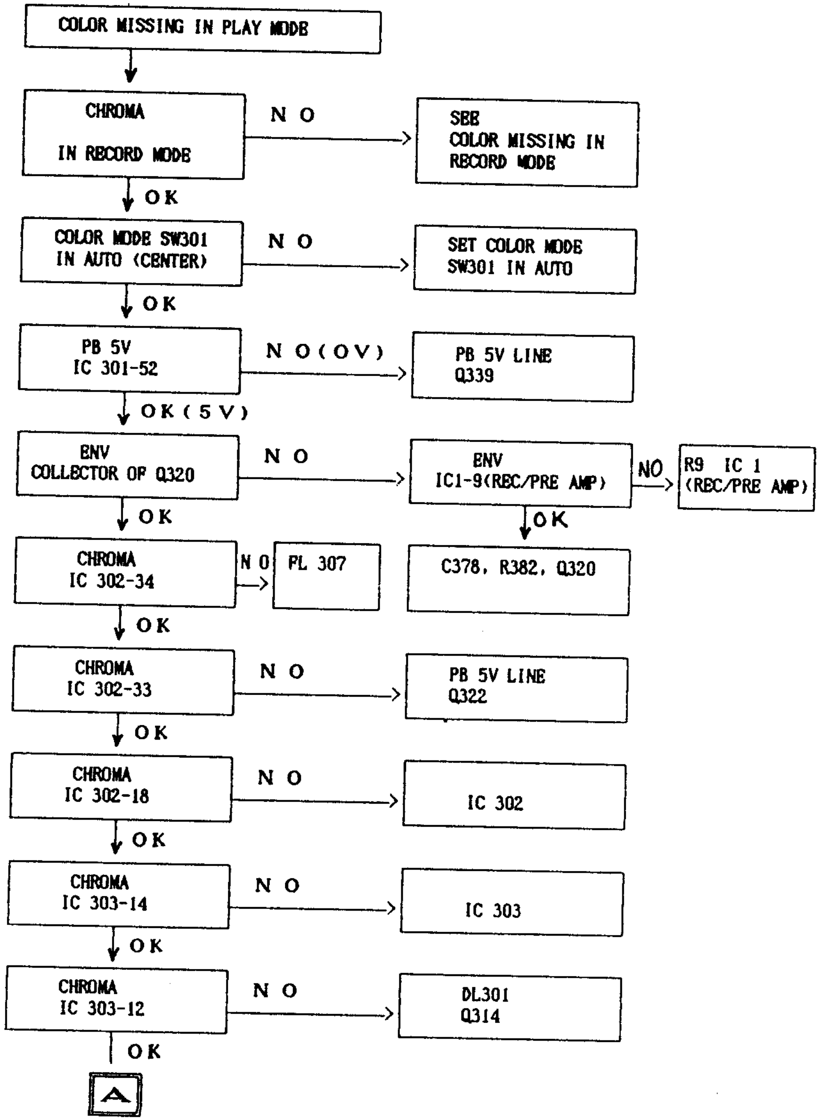

VIDEO MISSING IN RECORD MODE
"VIDEO" IN EE MODE
NO
SEE "VIDEO MISSING IN EE MODE"
OK
PLACE VCR IN RECORD MODE
FM VIDEO IC 1-3,5 (REC/PRE AMP)
OK
R 12 VIDEO HEAD
NO
FM VIDEO IC 1-17 (REC/PRE AMP)
OK
IC1 (REC/PRE AMP)
NO
FM - VIDEO IC 301-76
OK
FM - VIDEO C2 (REC/PRE AMP)
OK
C6,R6(REC/PRE AMP)
NO
R3, C1 (REC/PRE AMP)
NO
VIDEO IC301-68
OK
REC 12V BASE OF Q341
OK(0V)
NO(12V)
VR1.Q2 REC/PRE AMP
VIDEO IC 316-6
NO
R 454 R 453
OK
VIDEO JUDGE 12V IC 316-10
NO
(0V)
Q 360 Q 361
OK(12V)
X304, IC 316
NO
SEE " VIDEO MISSING IN EE MODE "

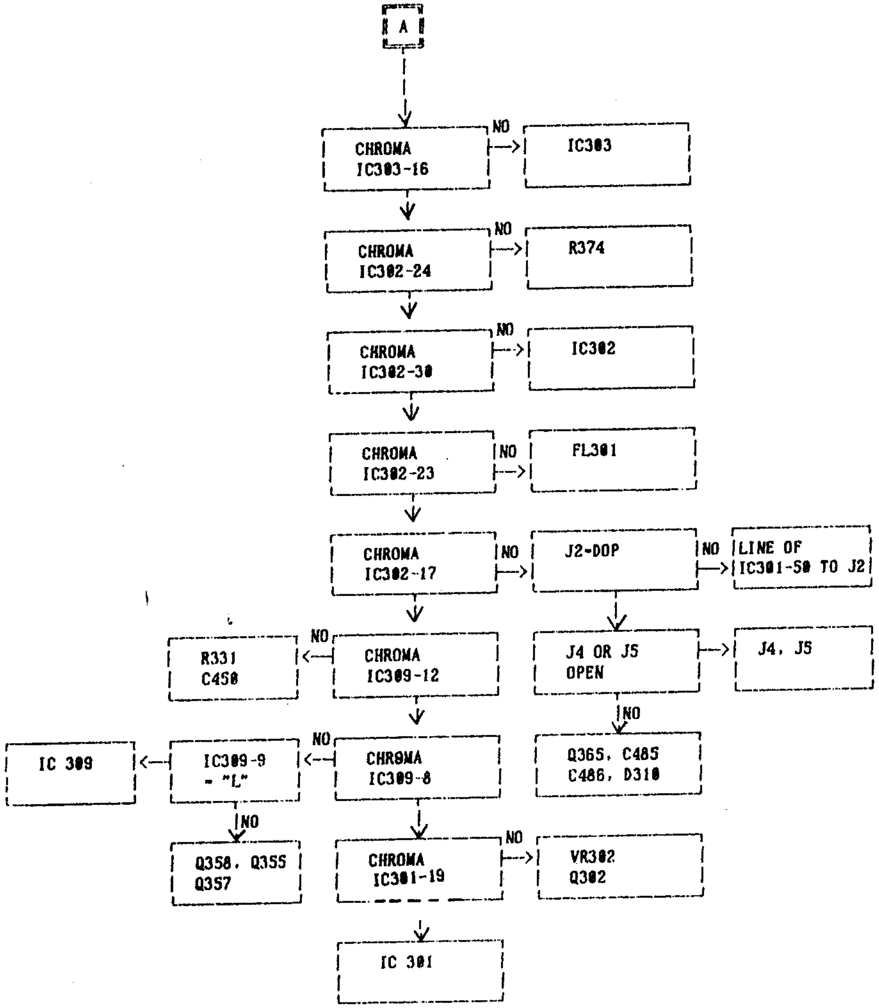

VIDEO MISSING IN PLAY MODE
VIDEO IN RECORD MODE
NO
SEE "VIDEO MISSING IN EE MODE"
OK
PLACE VCR IN PLAY MODE
PB 5V IC301-47 IC302-40 IC306-3 (REC/PRE AMP)
NO(0V)
Q339, R415 R416
OK (5V)
ENV BASE OF Q306
NO
ENV IC1-9 (REC/PRE AMP)
NO
IC 1 VIDEO HEAD
OK
ENV BASE OF Q1 (REC/PRE AMP)
NO
R8 L5
OK
Q1(REC/PRE AMP)
OK
ENV IC301-56
NO
Q306 Q307
OK
ENV IC301-42
NO
EE/REC 5V IC 301-14
NO
(0V)
IC 3101
OK
(5V)
D 302 Q 340 Q 343
OK
B
CONTINUE

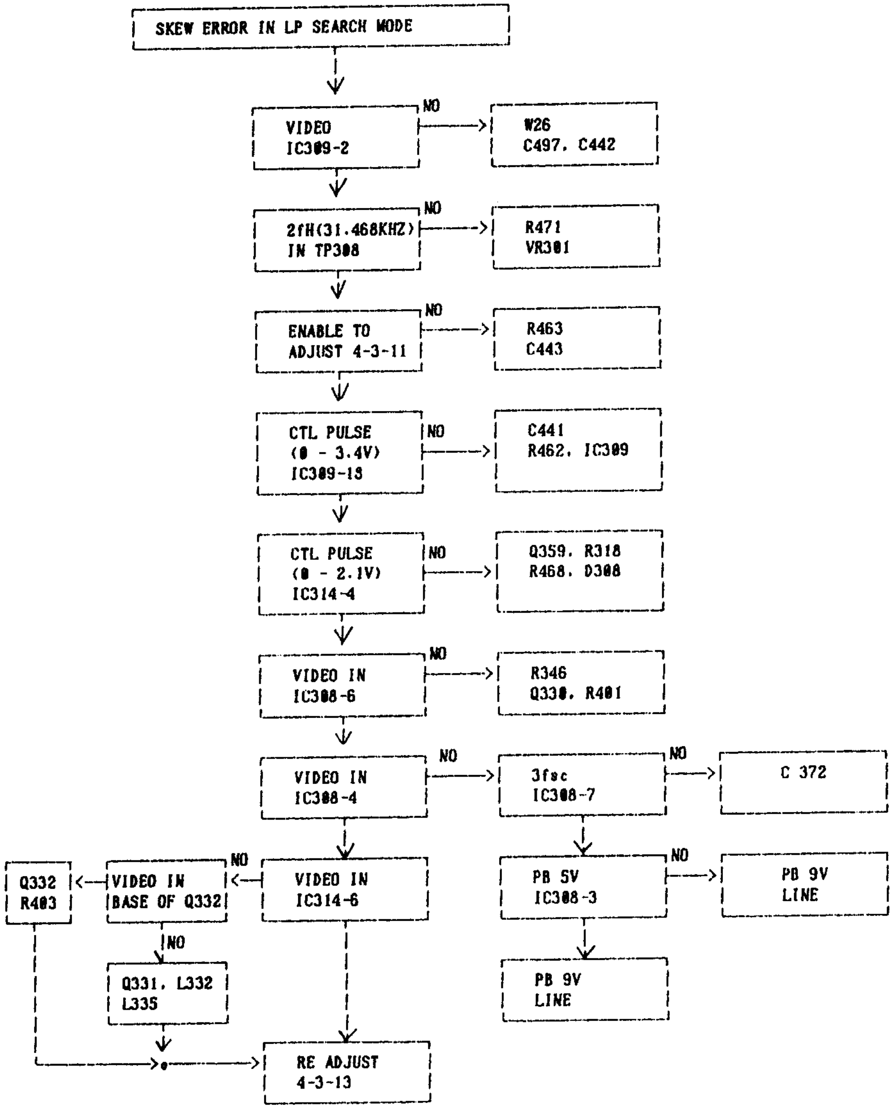

B
VIDEO IC 304-6
NO
VIDEO BASE OF Q319
NO
R322, Q308, C322
OK
R457, Q312 C338, R364
OK
VIDEO IC304-8
NO
D.O PULSE IC 301-50
NO
IC 301
OK
P.O PULSE IC 304-2
NO
Q307
OK
IC 304
VIDEO IC301-36
NO
C 328 Q 313
OK
VIDEO IC301-37
NO
VIDEO IC 306-6
NO
C353
OK
FSC (4.43MHZ) IC 305-1
NO
X301, Q323
OK
3 FSC IC 305-4
NO
IC 305
OK
PB 9V IC306-1
NO
Q 345 IC 317
OK(9V)
VIDEO IC 306-4
NO
C352 IC 306
OK
Q 316 Q 317
OK
C CONTINUE

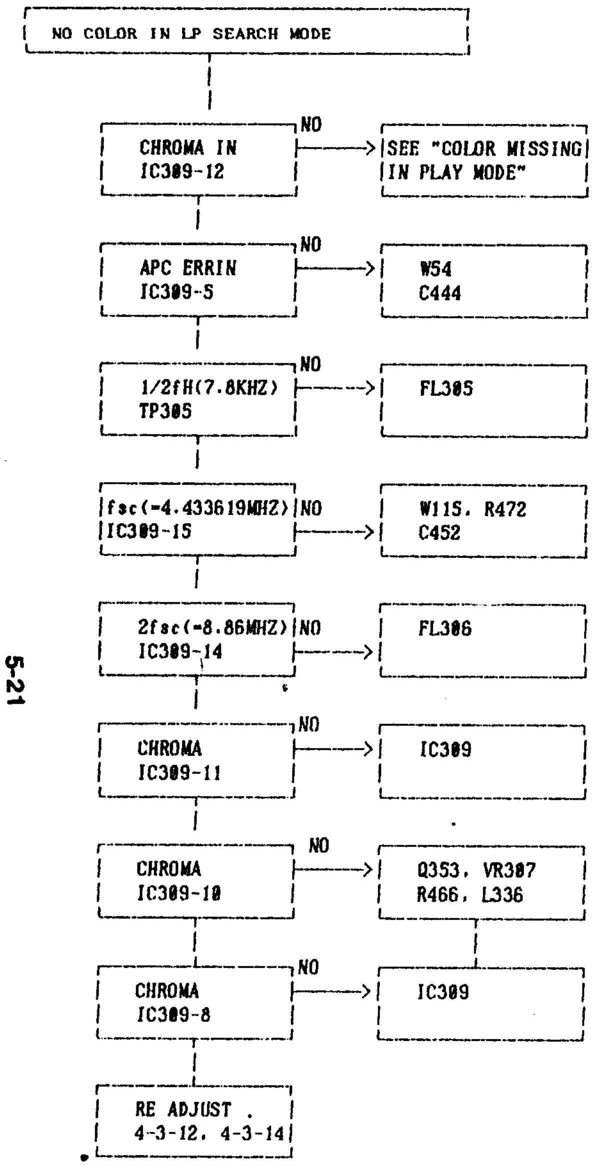

C
VIDEO IC 301-29
NO
IC 301
OK
VIDEO IC 301-7
NO
C 324
OK
VIDEO IC 301-28
NO
IC 301
OK
VIDEO IC 301-61
NO
R 307, FL302
OK
VIDEO IC 301-10
NO
IC 301
OK
VIDEO IC 314-8
NO
C 398, R398, Q329
OK
VIDEO IC 310-8
NO
Q 342
OK
VIDEO EMITTER OF Q336
NO
Q335, R408
OK
R 410, C402

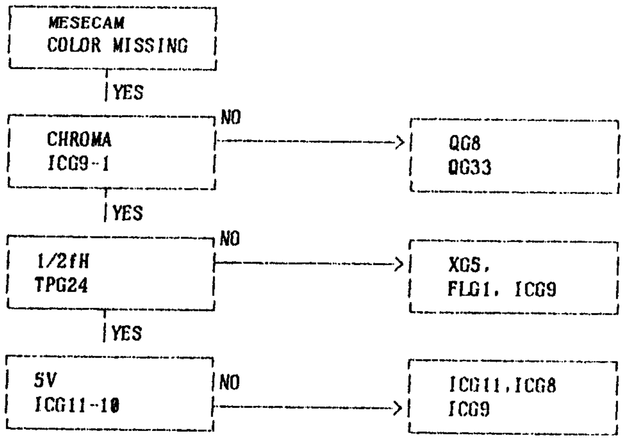

COLOR MISSING IN RECORD MODE
VIDEO IN RECORD MODE
NO
SEE VIDEO MISSING IN RECORD MODE
OK
COLOR MODE SW301 IN AUTO
NO
PLACE COLOR MODE SW301 IN AUTO(CENTER)
OK
PB5V IC302-52
NO (5V)
Q339
NO
Q322
OK(0V)
VIDEO FL 301-8
NO
5V IC 302-33
OK
IC 302
OK
CHROMA IC 302-23
OK
CHROMA IC 302-17
NO
PSC-4.43 MHZ IC 302-39.40
NO
X301, C385 L323
NO
FL 301
OK
OK
COMPOSITE SYNC IC 302-55
NO
LINE OF IC 301-4 IC 302-55
OK
CHROMA PL 301-5
NO
R358 PL301
5.06 MHZ IC 302-44
NO
IC 302 R377
OK
OK
CHROMA COLLECTOR OF Q315
NO
Q315 R360
5.06 MHZ IC 302-20
NO
FL 301
OK
OK
CHROMA IC 1-19 (REC/PRE AMP)
NO
VR2 C16
R377, R375 R376,C375 C376
OK
IC 1

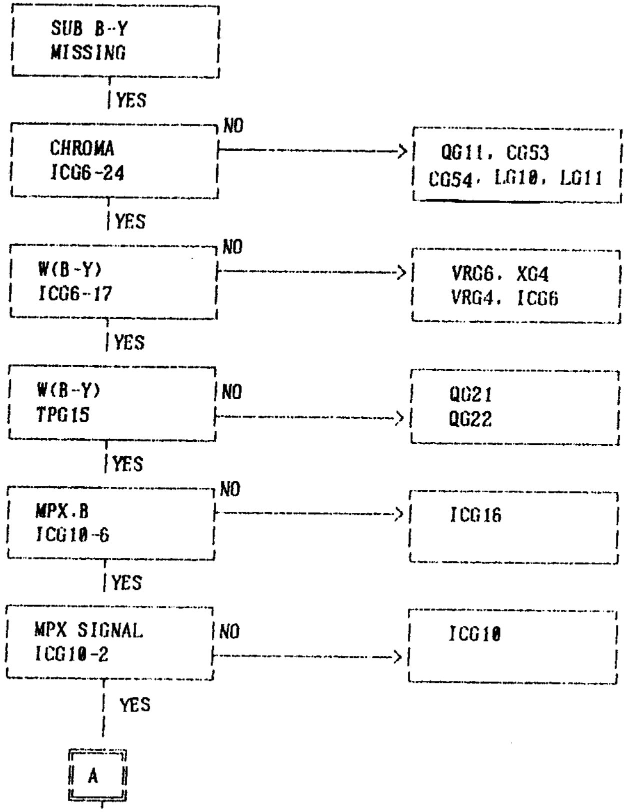

COLOR MISSING IN PLAY MODE
CHROMA IN RECORD MODE
NO
SEE COLOR MISSING IN RECORD MODE
OK
COLOR MODE SW301 IN AUTO (CENTER)
NO
SET COLOR MODE SW301 IN AUTO
OK
PB 5V IC 301-52
NO(OV)
PB 5V LINE Q339
OK(5V)
ENV COLLECTOR OF Q320
NO
ENV IC1-9(REC/PRE AMP)
NO
R9 IC 1 (REC/PRE AMP)
OK
C378, R382, Q320
OK
CHROMA IC 302-34
NO
FL 307
OK
CHROMA IC 302-33
NO
PB 5V LINE Q322
OK
CHROMA IC 302-18
NO
IC 302
OK
CHROMA IC 303-14
NO
IC 303
OK
CHROMA IC 303-12
NO
DL301 Q314
OK
A

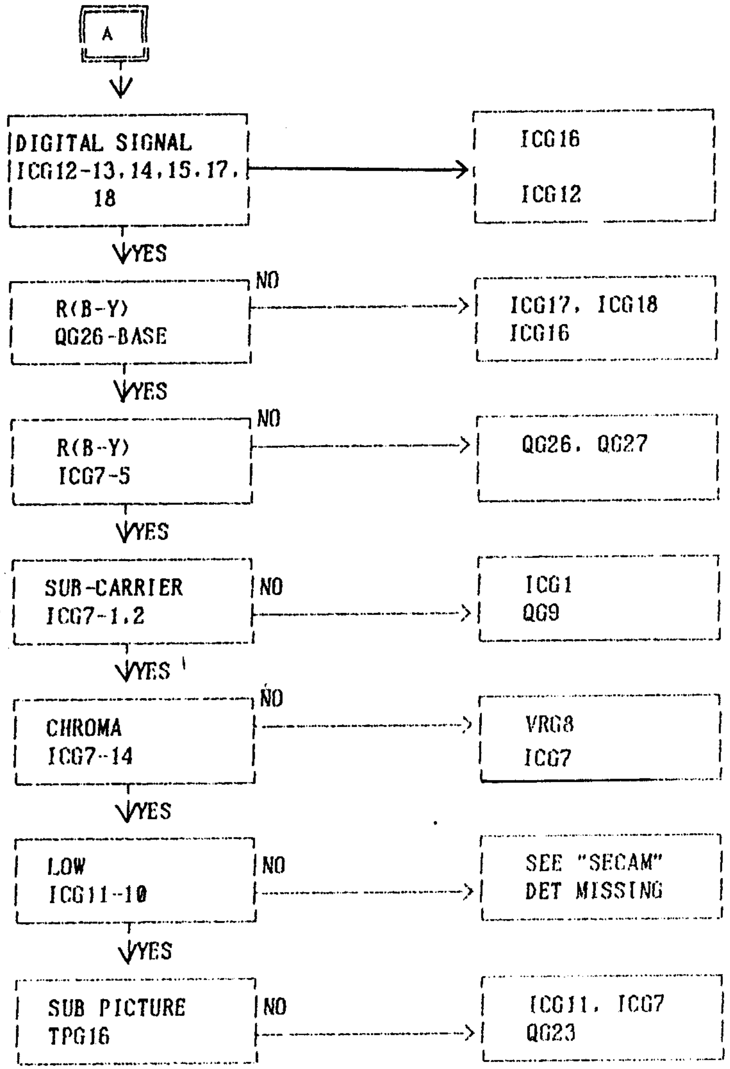

A
CHROMA IC303-16
NO
IC303
CHROMA IC302-24
NO
R374
CHROMA IC302-30
NO
IC302
CHROMA IC302-23
NO
FL301
CHROMA IC302-17
NO
J2-DOP
NO
LINE OF IC301-50 TO J2
J4 OR J5 OPEN
J4, J5
NO
Q365, C485 C486, D310
CHROMA IC309-12
NO
R331 C450
CHROMA IC309-8
NO
IC309-9 = "L"
IC 309
NO
Q358, Q355 Q357
CHROMA IC301-19
NO
VR302 Q302
IC 301

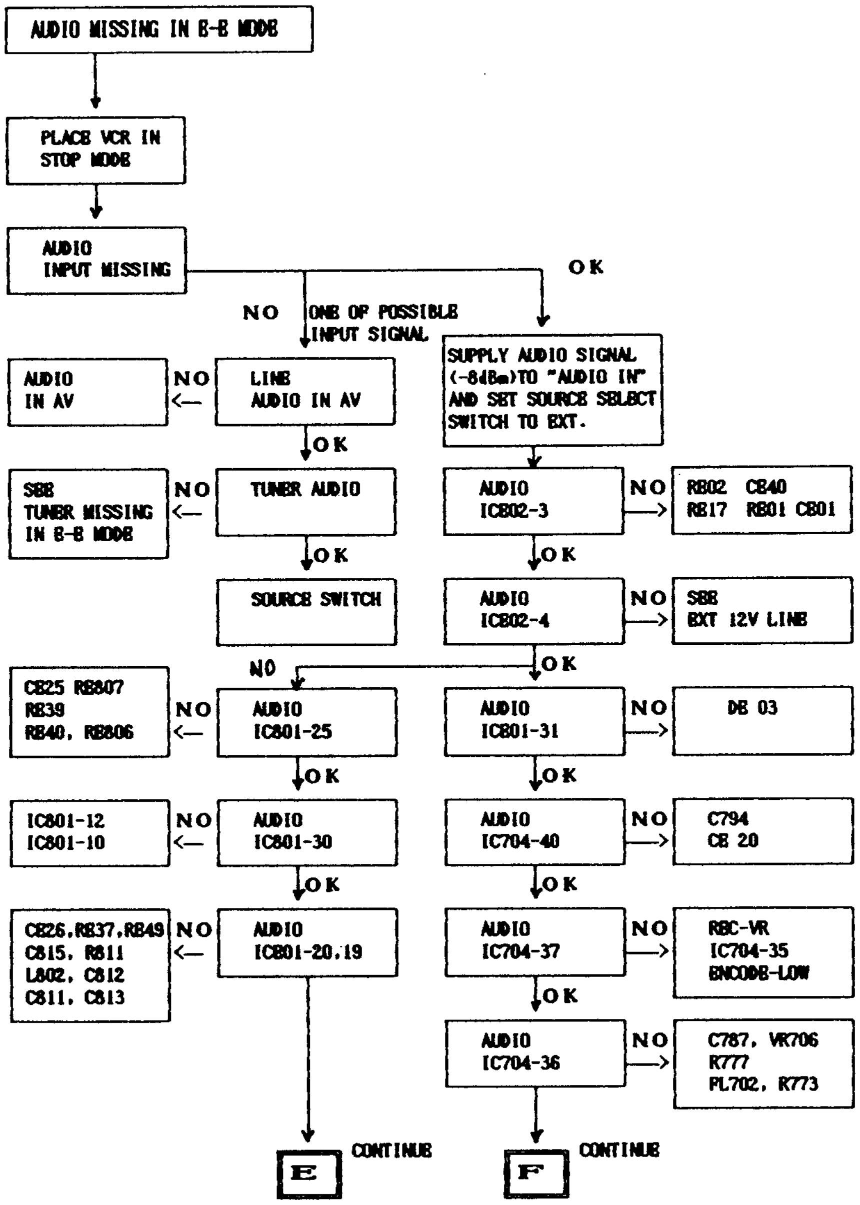

SKEW ERROR IN LP SEARCH MODE
VIDEO IC309-2
NO
W26 C497, C442
2fH(31.468KHZ) IN TP308
NO
R471 VR301
ENABLE TO ADJUST 4-3-11
NO
R463 C443
CTL PULSE (0 - 3.4V) IC309-13
NO
C441 R462, IC309
CTL PULSE (0 - 2.1V) IC314-4
NO
Q359, R318 R468, D308
VIDEO IN IC308-6
NO
R346 Q330, R401
VIDEO IN IC308-4
NO
3fsc IC308-7
NO
C 372
PB 5V IC308-3
NO
PB 9V LINE
PB 9V LINE
VIDEO IN IC314-6
NO
VIDEO IN BASE OF Q332
Q332 R403
NO
Q331, L332 L335
RE ADJUST 4-3-13

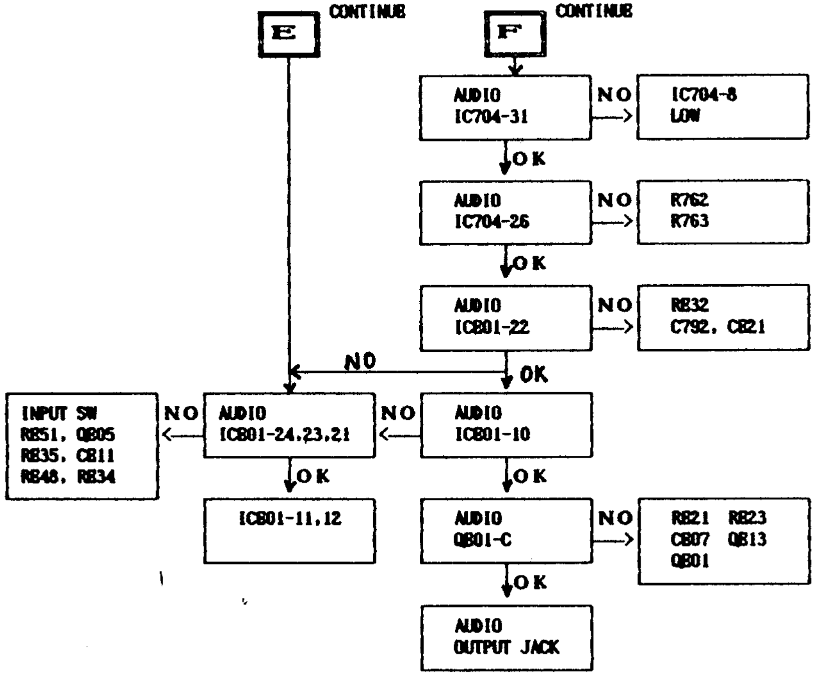

NO COLOR IN LP SEARCH MODE
CHROMA IN
IC309-12
NO
SEE "COLOR MISSING
IN PLAY MODE"
APC ERRIN
IC309-5
NO
W54
C444
1/2fH(7.8KHZ)
TP305
NO
FL305
fsc(=4.433619MHZ)
IC309-15
NO
W115, R472
C452
2fsc(=8.86MHZ)
IC309-14
NO
FL306
CHROMA
IC309-11
NO
IC309
CHROMA
IC309-10
NO
Q353, VR307
R466, L336
CHROMA
IC309-8
NO
IC309
RE ADJUST .
4-3-12, 4-3-14


MESECAM
COLOR MISSING
YES
CHROMA
ICG9-1
NO
QG8
QG33
YES
1/2fH
TPG24
NO
XG5,
FLG1, ICG9
YES
5V
ICG11-10
NO
ICG11,ICG8
ICG9

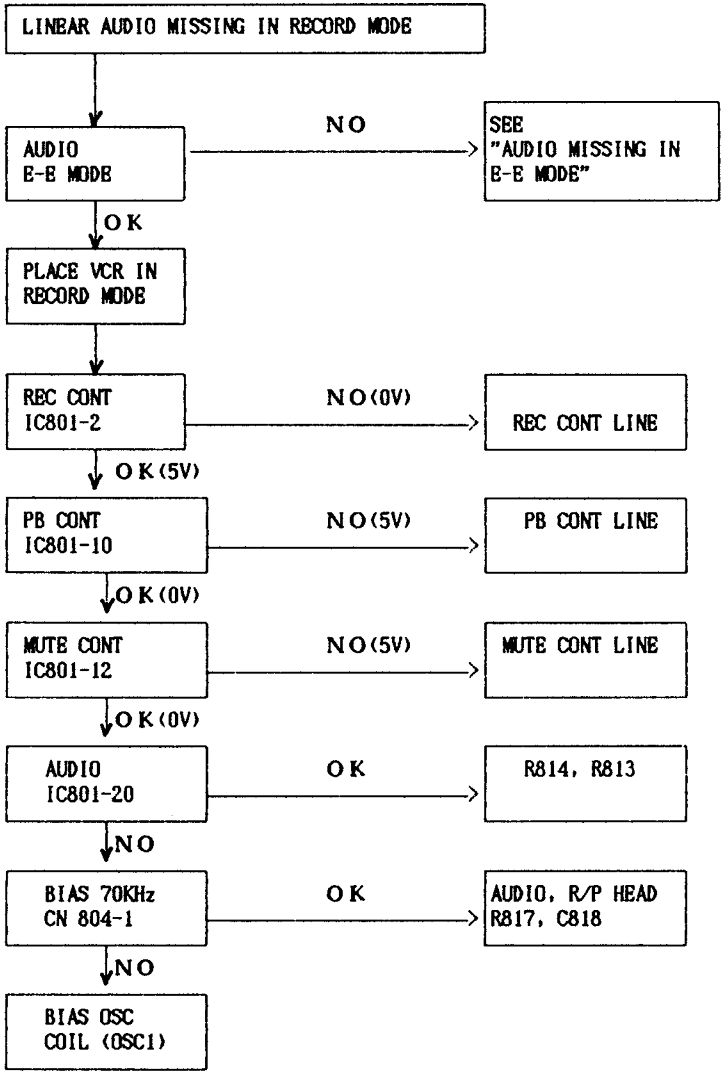

SUB B-Y
MISSING
YES
CHROMA
ICG6-24
NO
QG11, CG53
CG54, LG10, LG11
YES
W(B-Y)
ICG6-17
NO
VRG6, XG4
VRG4, ICG6
YES
W(B-Y)
TPG15
NO
QG21
QG22
YES
MPX.B
ICG10-6
NO
ICG16
YES
MPX SIGNAL
ICG10-2
NO
ICG10
YES
A

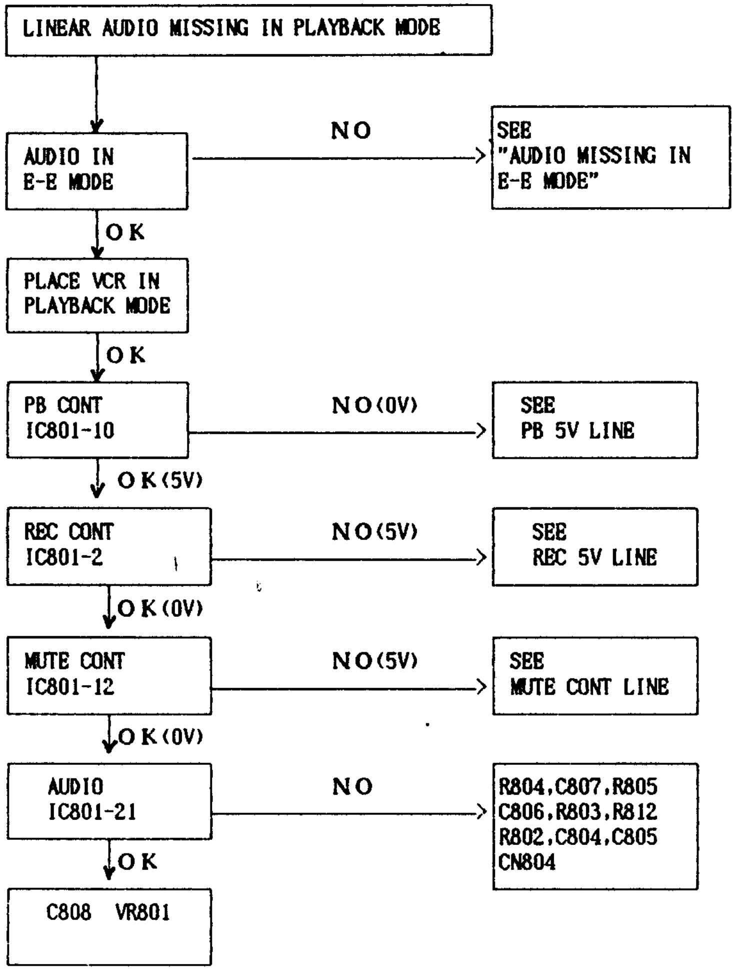

A
DIGITAL SIGNAL
ICG12-13,14,15,17,18
ICG16
ICG12
YES
R(B-Y)
QG26-BASE
NO
ICG17, ICG18
ICG16
YES
R(B-Y)
ICG7-5
NO
QG26, QG27
YES
SUB-CARRIER
ICG7-1,2
NO
ICG1
QG9
YES
CHROMA
ICG7-14
NO
VRG8
ICG7
YES
LOW
ICG11-10
NO
SEE "SECAM" DET MISSING
YES
SUB PICTURE
TPG16
NO
ICG11, ICG7
QG23

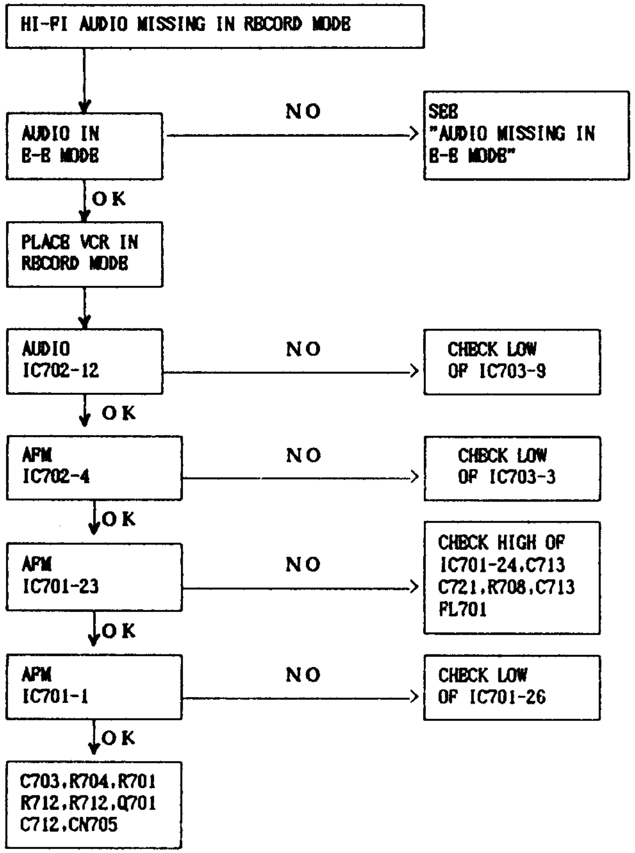

AUDIO MISSING IN E-E MODE
PLACE VCR IN STOP MODE
AUDIO INPUT MISSING
OK
NO
ONE OF POSSIBLE INPUT SIGNAL
SUPPLY AUDIO SIGNAL (-8dBm)TO "AUDIO IN" AND SET SOURCE SELECT SWITCH TO EXT.
AUDIO IN AV
NO
LINE AUDIO IN AV
OK
SEE TUNER MISSING IN E-E MODE
NO
TUNER AUDIO
OK
SOURCE SWITCH
AUDIO ICB02-3
NO
RB02 CB40
RB17 RB01 CB01
OK
AUDIO ICB02-4
NO
SEE EXT 12V LINE
OK
NO
CB25 RB807
RB39
RB40, RB806
NO
AUDIO IC801-25
AUDIO IC801-31
NO
DB 03
OK
IC801-12
IC801-10
NO
AUDIO IC801-30
AUDIO IC704-40
NO
C794
CB 20
OK
CB26,RB37,RB49
C815, R811
L802, C812
C811, C813
NO
AUDIO ICB01-20,19
AUDIO IC704-37
NO
REC-VR
IC704-35
ENCODE-LOW
OK
AUDIO IC704-36
NO
C787, VR706
R777
PL702, R773
E
CONTINUE
F
CONTINUE


E
CONTINUE
F
CONTINUE
AUDIO
IC704-31
NO
IC704-8
LOW
OK
AUDIO
IC704-26
NO
R762
R763
OK
AUDIO
IC801-22
NO
R832
C792, C821
NO
OK
INPUT SW
R851, Q805
R835, C811
R848, R834
NO
AUDIO
IC801-24,23,21
NO
AUDIO
IC801-10
OK
IC801-11,12
OK
AUDIO
Q801-C
NO
R821 R823
C807 Q813
Q801
OK
AUDIO
OUTPUT JACK

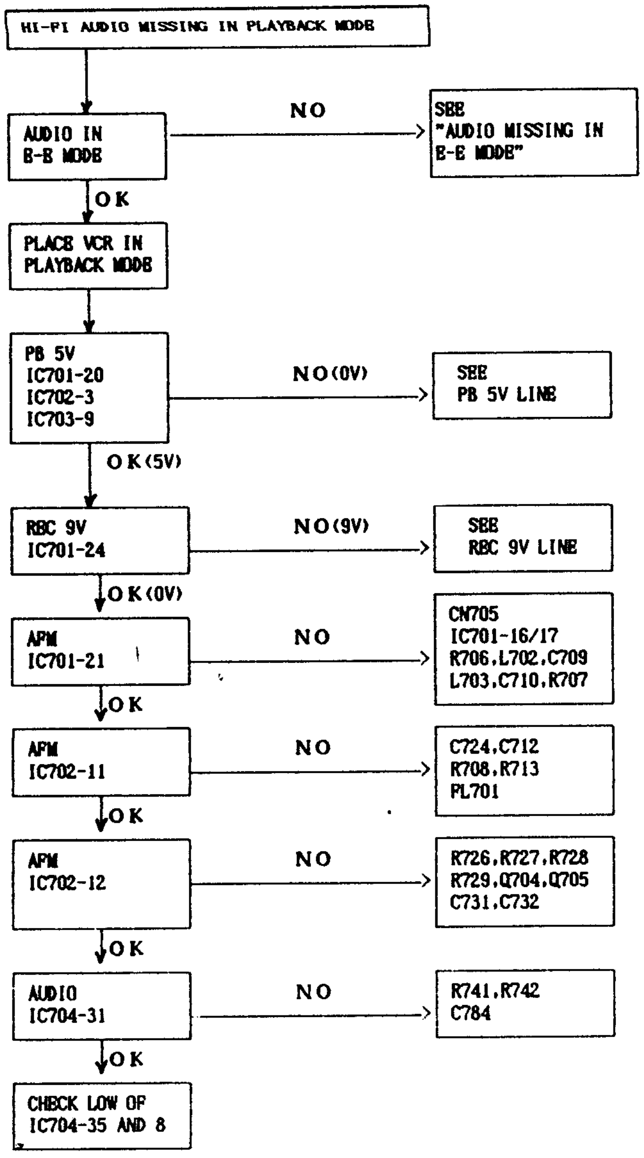
NOTES) IT IS ALSO THE CASE WITH R-CHANNEL


LINEAR AUDIO MISSING IN RECORD MODE
AUDIO
E-E MODE
NO
SEE
"AUDIO MISSING IN
E-E MODE"
OK
PLACE VCR IN
RECORD MODE
REC CONT
IC801-2
NO(0V)
REC CONT LINE
OK(5V)
PB CONT
IC801-10
NO(5V)
PB CONT LINE
OK(0V)
MUTE CONT
IC801-12
NO(5V)
MUTE CONT LINE
OK(0V)
AUDIO
IC801-20
OK
R814, R813
NO
BIAS 70KHz
CN 804-1
OK
AUDIO, R/P HEAD
R817, C818
NO
BIAS OSC
COIL (OSC1)

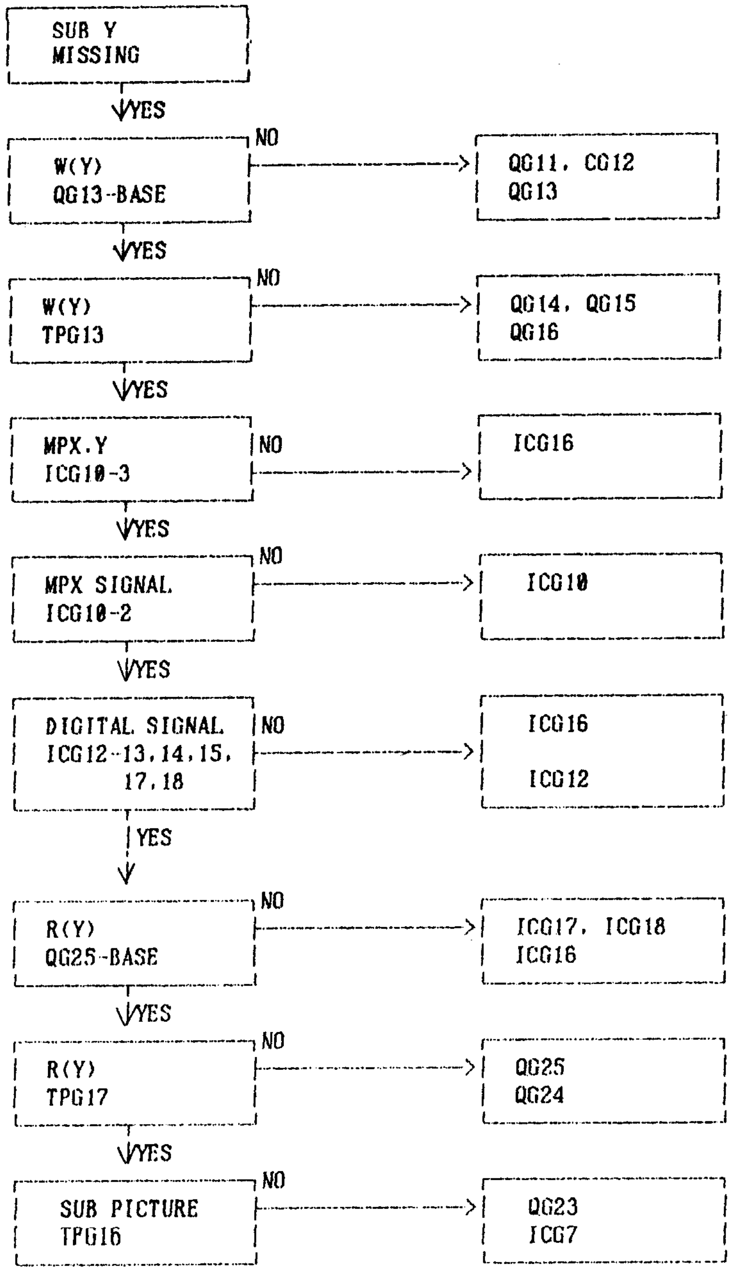

LINEAR AUDIO MISSING IN PLAYBACK MODE
AUDIO IN
E-E MODE
NO
SEE
"AUDIO MISSING IN
E-E MODE"
OK
PLACE VCR IN
PLAYBACK MODE
OK
PB CONT
IC801-10
NO(0V)
SEE
PB 5V LINE
OK(5V)
REC CONT
IC801-2
NO(5V)
SEE
REC 5V LINE
OK(0V)
MUTE CONT
IC801-12
NO(5V)
SEE
MUTE CONT LINE
OK(0V)
AUDIO
IC801-21
NO
R804,C807,R805
C806,R803,R812
R802,C804,C805
CN804
OK
C808 VR801

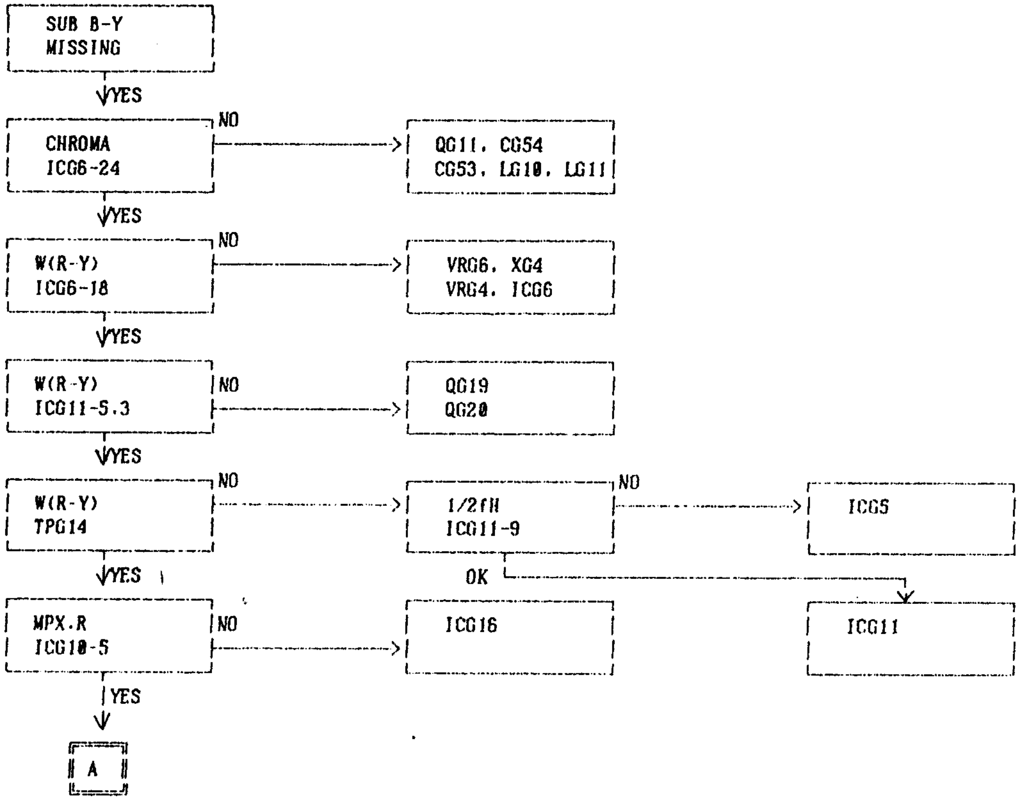

HI-FI AUDIO MISSING IN RECORD MODE
AUDIO IN
E-E MODE
NO
SEE
"AUDIO MISSING IN
E-E MODE"
OK
PLACE VCR IN
RECORD MODE
AUDIO
IC702-12
NO
CHECK LOW
OF IC703-9
OK
AFM
IC702-4
NO
CHECK LOW
OF IC703-3
OK
AFM
IC701-23
NO
CHECK HIGH OF
IC701-24,C713
C721,R708,C713
FL701
OK
AFM
IC701-1
NO
CHECK LOW
OF IC701-26
OK
C703,R704,R701
R712,R712,Q701
C712,CN705

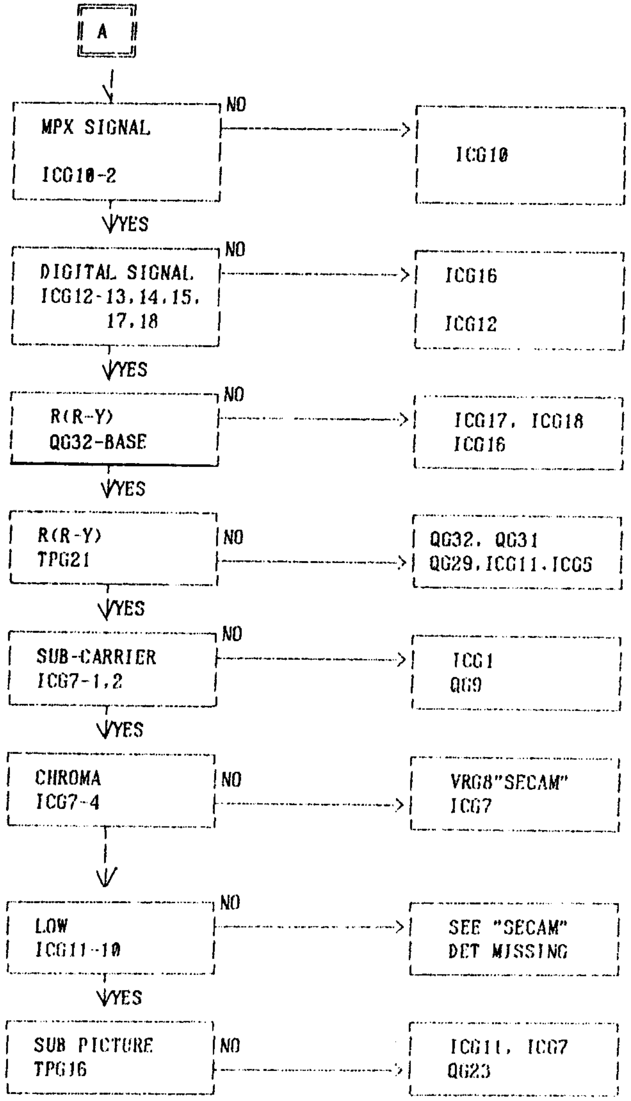
NOTES) IT IS ALSO THE CASE WITH R-CHANNEL

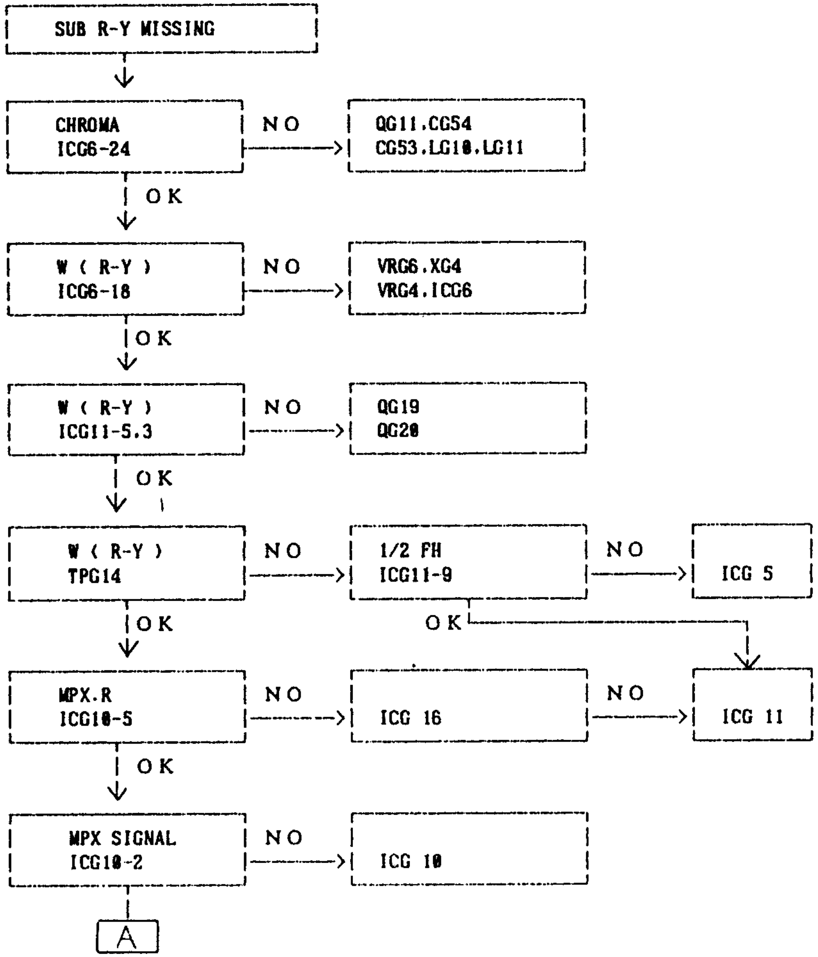

HI-FI AUDIO MISSING IN PLAYBACK MODE
AUDIO IN
E-E MODE
NO
SEE
"AUDIO MISSING IN
E-E MODE"
OK
PLACE VCR IN
PLAYBACK MODE
PB 5V
IC701-20
IC702-3
IC703-9
NO(0V)
SEE
PB 5V LINE
OK(5V)
REC 9V
IC701-24
NO(9V)
SEE
REC 9V LINE
OK(0V)
AFM
IC701-21
NO
CN705
IC701-16/17
R706,L702,C709
L703,C710,R707
OK
AFM
IC702-11
NO
C724,C712
R708,R713
FL701
OK
AFM
IC702-12
NO
R726,R727,R728
R729,Q704,Q705
C731,C732
OK
AUDIO
IC704-31
NO
R741,R742
C784
OK
CHECK LOW OF
IC704-35 AND 8

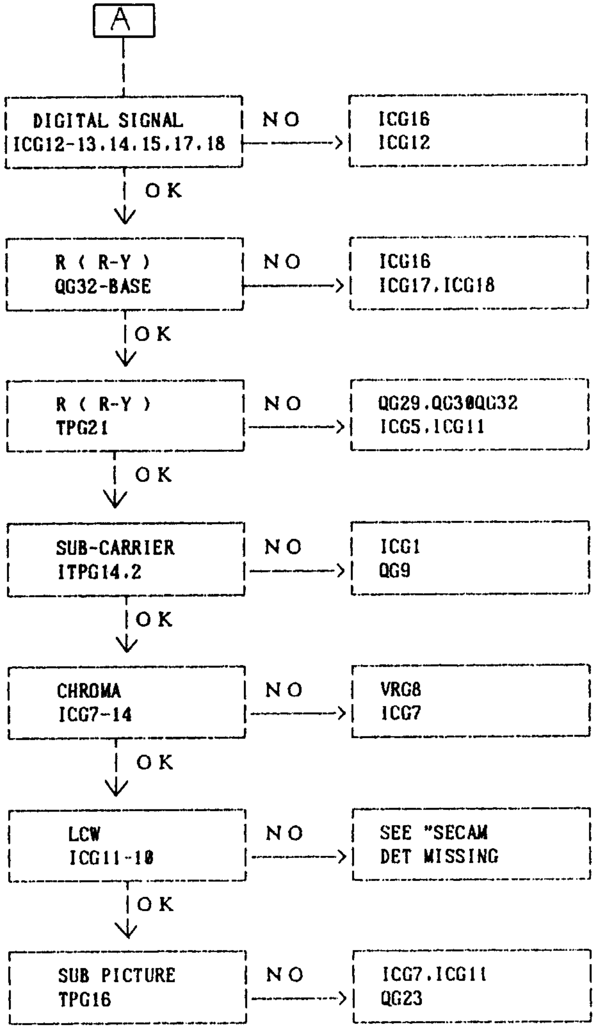
NOTES) IT IS ALSO THE CASE WITH R-CHANNEL

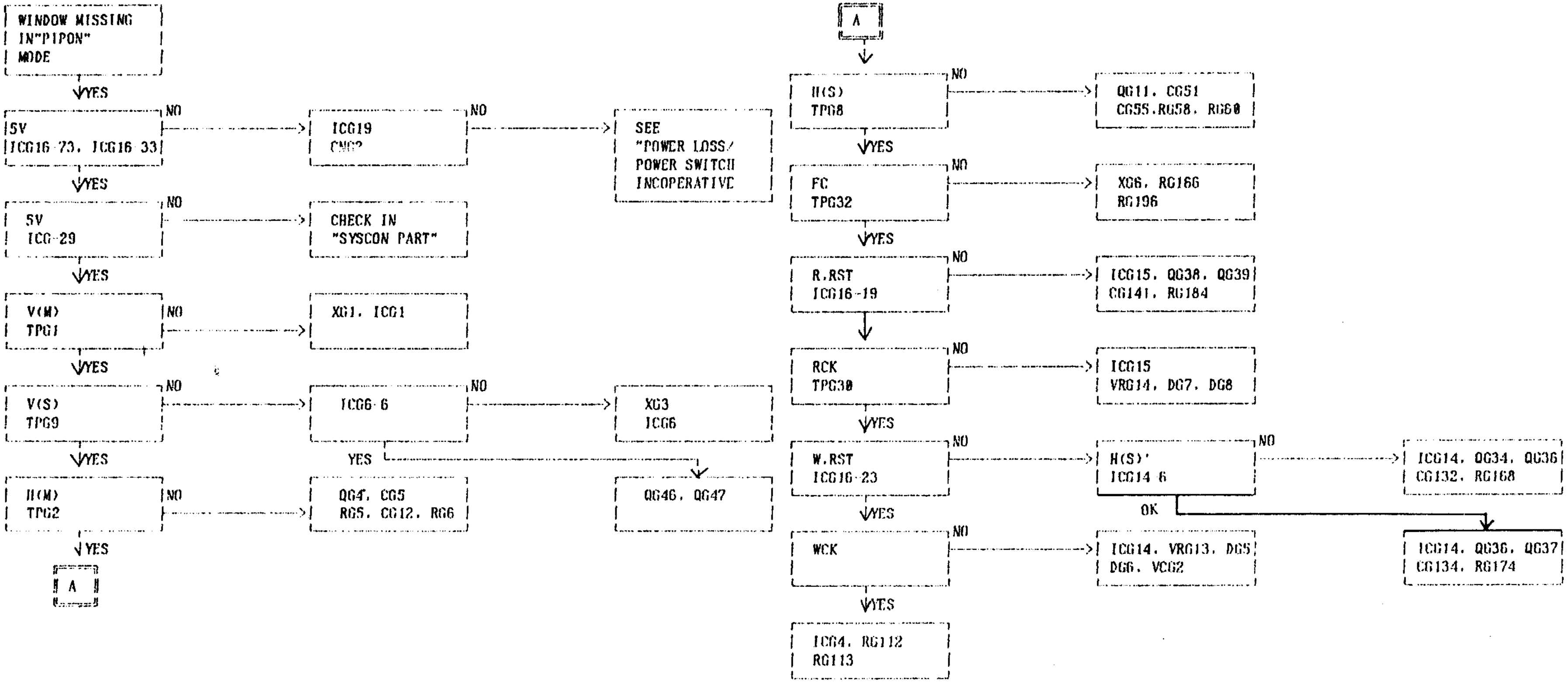

SUB Y
MISSING
YES
W(Y)
QG13-BASE
NO
QG11, CG12
QG13
YES
W(Y)
TPG13
NO
QG14, QG15
QG16
YES
MPX.Y
ICG10-3
NO
ICG16
YES
MPX SIGNAL
ICG10-2
NO
ICG10
YES
DIGITAL SIGNAL
ICG12-13,14,15,
17,18
NO
ICG16
ICG12
YES
R(Y)
QG25-BASE
NO
ICG17, ICG18
ICG16
YES
R(Y)
TPG17
NO
QG25
QG24
YES
SUB PICTURE
TPG16
NO
QG23
ICG7


SUB B-Y
MISSING
YES
CHROMA
ICG6-24
NO
QG11, CG54
CG53, LG10, LG11
YES
W(R-Y)
ICG6-18
NO
VRG6, XG4
VRG4, ICG6
YES
W(R-Y)
ICG11-5.3
NO
QG19
QG20
YES
W(R-Y)
TPG14
NO
1/2fH
ICG11-9
NO
ICG5
OK
ICG11
YES
MPX.R
ICG10-5
NO
ICG16
YES
A


A
MPX SIGNAL
ICG10-2
NO
ICG10
YES
DIGITAL SIGNAL
ICG12-13,14,15,
17,18
NO
ICG16
ICG12
YES
R(R-Y)
QG32-BASE
NO
ICG17, ICG18
ICG16
YES
R(R-Y)
TPG21
NO
QG32, QG31
QG29,ICG11,ICG5
YES
SUB-CARRIER
ICG7-1,2
NO
ICG1
QG9
YES
CHROMA
ICG7-4
NO
VRG8"SECAM"
ICG7
LOW
ICG11-10
NO
SEE "SECAM"
DET MISSING
YES
SUB PICTURE
TPG16
NO
ICG11, ICG7
QG23


SUB R-Y MISSING
CHROMA
ICG6-24
NO
QG11.CG54
CG53.LG10.LG11
OK
W (R-Y)
ICG6-18
NO
VRG6.XG4
VRG4.ICG6
OK
W (R-Y)
ICG11-5.3
NO
QG19
QG20
OK
W (R-Y)
TPG14
NO
1/2 FH
ICG11-9
NO
ICG 5
OK
OK
MPX.R
ICG10-5
NO
ICG 16
NO
ICG 11
OK
MPX SIGNAL
ICG10-2
NO
ICG 10
A


A
DIGITAL SIGNAL
ICG12-13.14.15.17.18
NO
ICG16
ICG12
OK
R (R-Y)
QG32-BASE
NO
ICG16
ICG17.ICG18
OK
R (R-Y)
TPG21
NO
QG29.QG30QG32
ICG5.ICG11
OK
SUB-CARRIER
ITPG14.2
NO
ICG1
QG9
OK
CHROMA
ICG7-14
NO
VRG8
ICG7
OK
LCW
ICG11-10
NO
SEE "SECAM
DET MISSING
OK
SUB PICTURE
TPG16
NO
ICG7.ICG11
QG23


WINDOW MISSING IN"PIPON" MODE
YES
5V ICG16-73, ICG16-33
NO
ICG19 CNG?
NO
SEE "POWER LOSS/ POWER SWITCH INCOPERATIVE
YES
5V ICG-29
NO
CHECK IN "SYSCON PART"
YES
V(M) TPG1
NO
XG1, ICG1
YES
V(S) TPG9
NO
ICG6-6
NO
XG3 ICG6
YES
QG46, QG47
YES
H(M) TPG2
NO
QG4, CG5 RG5, CG12, RG6
YES
A
A
H(S) TPG8
NO
QG11, CG51 CG55, RG58, RG60
YES
FC TPG32
NO
XG6, RG166 RG196
YES
R.RST ICG16-19
NO
ICG15, QG38, QG39 CG141, RG184
RCK TPG30
NO
ICG15 VRG14, DG7, DG8
YES
W.RST ICG16-23
NO
H(S)' ICG14-6
NO
ICG14, QG34, QG36 CG132, RG168
OK
ICG14, QG36, QG37 CG134, RG174
YES
WCK
NO
ICG14, VRG13, DG5 DG6, VCG2
YES
ICG4, RG112 RG113

6. REPLACEMENT PARTS LIST

1. Parts Replacement

Many electrical and mechanical parts in video cassette *recorder (player) have special safety-related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts whitch have these special safety chracteristics are indentified in this manual; electrical components having such features are indentified by ⚠ in the replacement parts lists and schmatic diagrams. The use of a substitude replacement part whitch does not have the same safety characteristics as the factory recommanded replacement parts shown in this service manual may create shock, fire or other hazard.*

2. Unless otherwise specified :

1) All resisters are in ohms (Ω),K = 1,000, M = 1,000K.

- **RD** : 1/8W, +/- 5% Carbon
- **RM** : 1/4W, +/- 5% Metal-film

2) All capacitors are in +/-10%, MF = μF.

- **CC** : PF = μμF, Ceramic,Temp
- **CK** : PK = μμF,Cramic,MK

- **CS** : Tantalium
- **CQ** : Polyester
- **CE** : Electrolytic

3) All coils are in microhenries (μH), M = 1,000 H.

3. ASS'Y = Assembly.

4. P.W.B = Printed Wiring Board.

5. ⚠ Mark : Safety related parts.

6. How to order replacement parts

To have your order filed promptly and correctly, please furnish the following informations.

1) Model Number

2) Location Number

3) Part Number

4) Description & Specification

7. P.W.B. Assembly is not Replacement Item.

- S.N.A : This parts is not replacement item.
  (S.N.A : Service Not Available)

6-1. MECHANICAL PARTS LIST

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
		TRANSPORT MECHANISM ASSEMBLY	
206	65234-600-420	REEL DISK(R) ASSY:POM+SUS	
207	65234-600-520	REEL DISK(S) ASSY:POM+SUS	
209	66674-617-810	SPRING TENSION:D7-NR2A	
210	65254-608-410	ARM TENSION ASSY:SECC+SUS304	
211	65274-601-310	TENSION BAND ASSY:D7-NR2A	
212	69000-280-142	ASSY P/B LOADING ARM (L):D-8	
215	69000-280-141	ASSY P/B LOADING ARM (R):D-8	
217	65254-610-830	REVIEW ARM ASSY:SECC+SUM	
218	67224-602-010	NUT-NYLON:M3X0.5 FE FZY	
219	66674-611-810	SPRING REVIEW ARM:SUSS304-WPB	
220	69000-271-080	ASSY-HOLDER LED:D7-NR2A	
221	66604-609-210	HOLDER LED:ABS	
222	62309-112-020	LED-IR:LN59	
223	63053-607-110	LEAD CON. ASSY:1429 #26 BLU 160CN211	
225	66674-611-510	SPRING TORSION A/C:SUS304-WPB	
226	67304-600-010	WASHER-PLAIN:SPG	
228	69000-280-143	A/C HEAD ASSY : D-8 PH5B	
229	66674-614-710	SPRING ROLLER SUPPEY:D7-NR2A	
234	64079-503-062	MAGNETIC HEAD F/E:VTR-1X2ERS11-072	
235	65253-602-210	ARM F/E HEAD:D7-NR2A	
236	66674-614-510	SPRING ARM ERASE:D7-NR2A	
239	65224-703-220	ROLLER SUPPLY:POM	
244	66674-613-110	SPRING I.B SLIDE:SUS304-WPB	
246	65264-601-120	PINCH ROLLER ASSY:TCR-65	
247	65253-609-120	PINCH ROLLER ARM ASSY:SECC+SUM	
248	66674-611-720	SPRING PINCH ARM:SUS 304-WPB	
249	65254-612-910	BRAKE MAIN(R) ASSY:D7-NR2A	
250	65254-613-010	BRAKE MAIN(L) ASSY:D7-NR2A	
251	66674-611-910	SPRING MAIN BRAKE:SUS304-WPB	
252	65254-608-720	BRAKE SUB(R) ASSY:DURANEX+SUS 420J2	
254	65253-604-010	SUB BRAKE L ASSY:POM+SUS	
255	66674-612-110	SPRING SUB BRAKE(L):SUS304-WPB	
265	66604-623-420	HEAT SINK B:A20179 FLAT	
278	69000-280-105	ASSY-JOINT BOARD:D8-PH5	
283	67224-602-210	CAM ADJUST:ALLOY 5	
284	66674-624-610	SPRING-ADJUST:SUS304-WPB	
295	66464-601-100	BRAKE WEAK(T):M90-44(WHT)	
296	66674-625-000	SPRING BRAKE WEAK(T):SUS 304 WPB	
404	64769-052-057	MOTOR DRUM:VDB1215AL	
450	69018-123-054	DRUM ASSY:G8-PH6A	
451	69000-370-043	ASSY BASE DRUM:D8-PH6A	
452	69000-370-121	ASSY LOWER DRUM	
453	69000-370-120	ASSY UPPER DRUM	
915	67004-100-810	SCREW-PH:+M2.6X4 FE FZY	
903	67008-130-081	SCREW-PH:+M3X8 FE FZY	
904	67068-820-040	SET SCREW:M2X3 FE FZB	
906	67008-130-061	SCREW-PH:+M3X6 FE FZY	
907	67004-100-710	SCREW-PH:+M3X4 FE FZY	
911	67009-130-051	SCREW-PH:+M3X5 FE FZY	
912	67008-126-081	SCREW-PH:+M2.6X8 FE FZY	
913	67008-123-181	SCREW-PH:+M2.3X18 FE FZY	
914	67094-700-710	SCREW-PWH:+M3X6 FE FZY	
915	67004-100-810	SCREW-PH:M2.6X4 FE FZY	
917	67094-700-620	SCREW-BH:+M3X7.5 BSW3 WP NI	
921	67108-330-061	SCREW-PH:M3X6 TAP TITE	
923	67094-700-720	SCREW-PWH:2-3X8 FE FZY	
956	67304-103-410	WASHER-PLAIN:3.2X6X0.5 POLYSLIDER	
953	67304-103-430	WASHER-PLAIN:3.2X6X0.13 POLY SLIDE	
954	67304-600-410	WASHER-PLAIN:PI3.1*PI8*T0.5	
957	67334-600-310	SLIT WASHER:PI2.5XPI5.2XT0.5	
958	67334-600-410	SLIT WASHER:PI3.2XPI6XT0.5	
960	67334-600-320	SLIT WASHER:02.5*09*0.5	
964	67304-103-420	WASHER-PLAIN:3.2X6X0.25 POLY SLIDER	
971	67358-103-006	RING-E:PI3 STSC304-CSP	
		BOTTOM SIDE MECHANISM	
208	66604-626-310	HEAD BRUSH ASSY(G8):B.B+DAMPER+P.B	
256	65204-604-210	LOADING GEAR L:M90-44	
263	66052-600-310	IDLER CLUTCH ASSY:D7-NR2A	
271	65274-600-811	CAPSTAN BELT:DC-66	
272	65274-600-720	IDLER BELT:CR-65	
273	65253-602-010	PLATE MAIN SLIDE:SECCE 20/20	
274	65253-602-120	I.B SLIDE ASSY:SECC+SUM+SUS	
275	66834-602-510	SLIDE STOPPER:CY-65	
276	66674-613-110	SPRING I.B SLIDE:SUS304-WPB	
277	65292-600-310	LOADING MOTOR ASS'Y: D7-NR2A	
	63599-016-067	MODE SWITCH: G-7 ALPS	
	64769-052-140	MOTOR LOADING:RF-370C-15370	
	65274-601-110	BELT LOADING	
	65274-601-210	BELT RELEASE	
	66674-615-910	SPRING LOADING	
281	69000-270-109	ASSY PHOTO INTERRUPTER : G-8 NL4	
289	64769-160-161	MOTOR D-D CAPSTAN:VFC 1510 CL	
905	67008-130-171	SCREW-PH:M3*3 FE FZY	
906	67008-130-061	SCREW-PH:+M3X6 FE FZY	

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
907	67004-100-710	SCREW-PH:+M3X4 FE FZY	
911	67009-130-051	SCREW-PH:+M3X5 FE FZY	
914	67094-700-710	SCREW-PWH:+M3X6 FE FZY	
953	67304-103-430	WASHER-PLAIN:3.2X6X0.13 POLY SLIDE	
955	67304-700-610	WASHER PLAIN:4.2X8X0.5 POLY SLIDE	
956	66864-600-410	WASHER-DUST:6X0.5 POLY AMID	
973	67358-102-506	RING-E:PI2.5 STSC304-CSP	S.N.A
Q005	62309-110-243	PHOTO-INTERRUPTER:NJL5141EA	
		HOUSING ASSEMBLY	
507	65204 603 010	RELAY GUIDE(R):CURACON(M90-44)	S.N.A
508	65204 603 120	RELAY GEAR(L):DURACON(M90-44)	S.N.A
509	65254 609 510	MASK CAM LEVER:DURACON(M90-44)	S.N.A
510	69000 470 110	ASSY CASSETTE HOLDER:F/L SYSTEM(G7)	
519	66152 600 110	UPPER CHASSIS:SEC-E 20/20 1.0	
521	65202 600 220	SIDE ARM(R):DURACON(M90-44)	
522	66674 616 410	ARM TORSION SPRING R:SWP-B P1.0	
523	65202 600 320	SIDE ARM(L):DURACON(M90-44)	
524	66674 616 310	ARM TORSION SPRING L:SWP-B P1.0	
525	65203 603 730	ARM GEAR:ESLON PBT(ES830S)	
526	66664 605 510	ARM GEAR PIN:SUS 420 J2-8	
527	66674 616 610	EJECT SPRING:SWP-B	
528	65203 602 210	WORM GEAR HOUSING:DURACON	
529	65203-600-910	TIMING GEAR:DURACON(M90-44)	
530	66253-602-310	BRKT HOUSING:SPG T1.0	
531	66463 601 310	LID OPENER:DURACON(M90-44)	
532	66674 616 510	LID OPENER SPRING:SWP-B P10.5	
533	67642-602-336	FRONT MASK(VX-790/SEG).67642-602-364(VI-790/UK)	
534	66674 602 810	MASK-SPRING:SUS 304	
535	63569 700 210	REC SAFETY-S/W:MSW-1465 NBKU	
538	63569 700 325	CASSETTE-S/W:MSM-1429CA(0.15T)	
547	69000 470 410	ASS'Y-SUPPLY END SENSOR:F/L SYSTEM	
548	69000-470-310	ASSY-TAKE UP END SENSOR:F/L SYSTEM	
908	67004-101-415	SCREW-BH:M3*5 FE FZY	
909	67154 101 420	SCREW TAP PWH:2S-M3X4.5 FE FZY	
910	67108 600 010	SCREW TAP BH:2S-M3X5 FE FZY	
Q001	62139 701 020	TRANSISTOR:KSR2001	
Q002	62139 701 020	TRANSISTOR:KSR2001	
Q003	62139 401 055	TR-PHOTO:PN202S(R)	
Q004	62139 401 055	TR-PHOTO:PN202S(R)	
		ASS'Y JOINT BOARD: D8-PH5	
	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
C110	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C229	61417-109-211	C-CERAMIC.HK:CK45F TAPG 0.1M-Z	
C230	61607-803-120	C-ELECTROLYTIC.NP:CE04W TAPG 16V 10M	
C234	61609-121-470	C-ELECTROLYTIC:CE04W 10V 47M(SS)	
CN204	63349-062-590	CONNECTOR-WAFER:5268-10A	S.N.A
CN205	63349-062-620	CONNECTOR WAFER:5268-13A	S.N.A
CN206	63349-062-550	CONNECTOR-WAFER:5268-06A	S.N.A
CN207	63349-062-520	CONNECTOR-WAFER:5268-03A	S.N.A
CN208	63349-062-380	CONNECTOR-WAFER:5267-09A	S.N.A
CN209	63349-062-530	CONNECTOR-WAFER:5268-04A	S.N.A
CN210	63349-062-311	CONNECTOR WAFER:5267-02A(BLK)	S.N.A
CN211	63349-062-310	CONNECTOR-WAFER:5267-02A	S.N.A
CN212	63349-062-550	CONNECTOR-WAFER:5268-06A	S.N.A
CN214	63349-062-560	CONNECTOR-WAFER:5268-07A	S.N.A
IC1	62119-103-624	IC:BA6209(K)	
Q204	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q207	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q208	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q209	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q210	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
R238	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
R239	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R240	61048-177-822	R-METAL FILM:RM 1/8TS 8.2K-J	
R242	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R243	61049-427-109	R-METAL OXIDE:RS IP 1.0-J	
R244	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
R245	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
R246	61048-177-474	R-METAL FILM:RM 1/8TS 470K-J	
R247	61048-177-224	R-METAL FILM:RM 1/8TS 220K-J	
R248	61048-177-391	R-METAL FILM:RM 1/8TS 390-J	

*S.N.A :SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
		INSTRUMENT ASSEMBLY	
1	69000-183-008	ASSY PANEL FRONT:VX-790/SEG	
1	69000-183-009	ASSY PANEL FRONT:VI-790/UK	
2	67601-606-510	PANEL FRONT:ABS 94HB(VX-770)BLK	S.N.A
10A	67624-629-710	KNOB DUMMY(A):ABS 94HB(VX-770)BLK	S.N.A
10B	67623-620-710	KNOB DUMMY(B):ABS 94HB(VX-770)BLK	S.N.A
	67623-620-720	KNOB DUMMY(B):ABS 94HB(VI-770)BLK	S.N.A
10C	67624-629-210	KNOB DUMMY(C):ABS 94HB(VX-770)BLK	S.N.A
	67624-629-220	KNOB DUMMY(C):ABS 94HB(VI-770)BLK	S.N.A
12	67624-629-410	KNOB CHANNEL:ABS 94HB(VX-770)BLK	S.N.A
13	67623-621-110	KNOB TIMER:ABS 94HB(VX-770)BLK	S.N.A
16A	67623-620-810	KNOB FUN(A):ABS 94HB(VX-770)BLK	S.N.A
16A	67623-620-820	KNOB FUN(A):ABS 94HB(VI-770)BLK	S.N.A
16B	67623-620-910	KNOB FUN(B):ABS 94HB(VX-770)BLK	S.N.A
16C	67623-621-010	KNOB FUN(C):ABS 94HB(VX-770)BLK	S.N.A
19	67624-629-310	KNOB POWER:ABS 94HB(VX-770)BLK	S.N.A
51	67743-600-510	ASSY-DOOR FRONT:AL(SVX-319)	
51	67743-600-540	ASSY-DOOR FRONT:VI-790	
80A	67654-616-910	WINDOW DISPLAY(A):PVC 1.0T(VX-770)	S.N.A
	67654-616-920	WINDOW DISPLAY(A):PVC 1.0T(VI-770)	S.N.A
80B	67654-617-060	WINDOW DISPLAY(B):PVC 1.0T(VX-790)	S.N.A
	67654-617-080	WINDOW DISPLAY(B):PVC 1.0T(VI-790)	S.N.A
83	67614-608-230	INLAY-CONTROL:PVC T0.5(VX-790)	S.N.A
	67614-608-240	INLAY-CONTROL:PVC T0.5(VI-790)	S.N.A
122	69098-600-934	REGULATOR ASSY:PAL VX-790 G8W HI-FI	
	69098-600-935	REGULATOR ASSY:PAL VI-790 G8W HI-FI	
130	66020-601-530	FRAME:HIPS 94HB	S.N.A
131	66612-601-710	BOTTOM-COVER:SECC T0.5	
134	66002-602-020	TOP-CABINET:PVC STEEL T0.85*580*375G-8WH	
137	69857-603-005	ASSY-MAIN A:VX-790 PAL HI-FI V/IO	S.N.A
	69857-603-742	ASSY-MAIN A:VI-790 PAL HI-FI V/IO	S.N.A
138	69857-603-006	ASSY-MAIN B:VX-790 PAL HI-FI SYS/SER/LNR	S.N.A
	69857-603-100	ASSY-MAIN B:VI-790 PAL HI-FI SYS/SER/LNR	S.N.A
141	69802-603-092	ASSY MAIN C:VX-790 HI-FI AFM	S.N.A
142	66634-602-610	CLAMPER WIRE:PE BLK	S.N.A
143	66614-714-310	BRKT-GUIDE TOP S:SPG T1.0	S.N.A
144	66114-600-710	BRKT PREAMP(VX-750):SECC 0.8T	S.N.A
151	69881-603-203	ASSY-FUNCTION/TIMER:VX-790	
	69881-603-204	ASSY-FUNCTION/TIMER:VI-790	
160	66664-608-110	HINGE-MAIN PCB:NYLON6	S.N.A
184	67154-101-440	SCREW-TAP.PWH:2-3X10 FE FZY	
190	67158-240-121	SCREW BH:2-4*12 FE FZY	
191	67158-240-180	SCREW TAP PWH:2-4*16 FE FZY	
194	67158-240-103	SCREW-TAP BH:2S-4*10 FE FZY	
200	69018-150-149	FULL DECK ASSY:D8-PH6B	
278	69000-280-105	ASSY JOINT BOARD:PAL D8-PH5	
454	69812-603-020	ASSY-PRE AMP:4HEAD PAL G-8 HI-FI	
501	66122-700-502	HOUSING ASSY:F/L SYSTEM	
533	67642-602-336	FRONT MASK:ACRYL VX-790	
	67642-602-364	FRONT MASK:ACRYL VI-790	
148	69852-603-001	ASS'Y MAIN-D:VX-790 HI-FI PIP	
	69852-603-002	ASS'Y MAIN-D:VI-790 HI-FI PIP	

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK

* S.N.A:SERVICE NOT AVAILABLE

6-2. ELECTRICAL REPLAEMENT PARTS LIST

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
	69098-600-934	REGULATOR ASSY:VX-790 G8W PAL HI-FI	
	69098-600-935	REGULATOR ASSY:VI-790 G8W PAL HI-FI	
	63599-014-047	SWITCH:WK802 A80	
C901	61469-502-010	C-CERAMIC DISK:CS17-E2GA 472 MYAS	
C902	61609-402-440	C-ELECTROLYTIC:CE04W 35V 4700M(S)	
C903	61609-141-475	C-ELECTROLYTIC:CE04W 16V 4700M	
C904	61609-401-720	C-ELECTROLYTIC:CE04W 25V 22M	
C904	61609-401-460	C-ELECTROLYTIC:CE04W 16V 47M	
C905	61419-104-310	C-CERAMIC.HK:CK45B 50V 0.01M-K	
C906	61609-401-720	C-ELECTROLYTIC:CE04W 25V 22M	
C908	61607-122-471	C-ELECTROLYTIC:CE04W TAPG 25V 47M	
C909	61607-122-471	C-ELECTROLYTIC:CE04W TAPG 25V 47M	
C910	61609-403-090	C-ELECTROLYTIC:CE04W 100V 47M	
C911	61609-403-090	C-ELECTROLYTIC:CE04W 100V 47M	
C912	61419-104-310	C-CERAMIC.HK:CK45B 50V 0.01M-K	
C913	61609-124-473	C-ELECTROLYTIC:CE04W 50V 47M	
C914	61607-122-471	C-ELECTROLYTIC:CE04W TAPG 25V 47M	
C915	61419-104-310	C-CERAMIC.HK:CK45B 50V 0.01M-K	
C916	61609-402-102	C-ELECTROLYTIC:CE04W 6.3V 1000M(SG)	
C917	61419-104-410	C-CERAMIC.HK:CK45B 50V 0.0022M-K	
C918	61419-106-030	C-CERAMIC.HK:CK45D 50V 103-M	
C919	61419-106-030	C-CERAMIC.HK:CK45D 50V 103-M	
C920	61419-106-030	C-CERAMIC.HK:CK45D 50V 103-M	
C921	61419-104-310	C-CERAMIC.HK:CK45B 50V 0.01M-K	
D901	62169-201-060	DIODE:1N4002	
D902	62169-201-060	DIODE:1N4002	
D903	62169-406-482	DIODE:1N4148 SAMSUNG	
D904	62169-406-482	DIODE:1N4148 SAMSUNG	
D905	62169-406-482	DIODE:1N4148 SAMSUNG	
D907	62169-406-482	DIODE:1N4148 SAMSUNG	
D908	62169-406-482	DIODE:1N4148 SAMSUNG	
DRUM	62119-601-183	IC:MC7805C SST	
DS901	62169-403-851	DIODE(B.D):RS 402L	
DS902	62169-403-851	DIODE(B.D):RS 402L	
F901	64709-084-794	FUSE:5X20M/M T500MA 250V	
F902	64709-084-795	FUSE:5X20M/M T2.5A 250V	
F903	64709-084-795	FUSE:5X20M/M T2.5A 250V	
FL901	64529-418-094	LINE FILTER:SQ 2.2MH	
IC901	62119-401-293	I.C:STK 7233	
IC902	62119-601-183	IC:MC7805C SST	
L901	62429-014-441	FERRITE BEED:3.5X6X1.2H	
L902	62429-014-441	FERRITE BEED:3.5X6X1.2H	
L903	62429-014-442	COIL CHOKE:MC-182 201M	
Q901	62139-701-012	TRANSISTOR:KSR 1003	
Q905	62147-401-832	TRANSISTOR:KSC 2328-Y TAPG E-C-B	
Q906	62147-401-832	TRANSISTOR:KSC 2328-Y TAPG E-C-B	
R901	61045-527-202	R-METAL OXIDE:RS 1/2W 2K-J	
R902	61045-527-020	R-METAL OXIDE:RS 1W 0.2-J	
R903	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R904	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R905	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
R906	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R907	61048-257-680	R-METAL FILM:RM 1/4R 68-J	
R908	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R909	61048-277-560	R-METAL FILM:RM 1/4T 56-J	
R911	61048-277-820	R-METAL FILM:RM 1/4T 82-J	
R912	61048-277-820	R-METAL FILM:RM 1/4T 82-J	
R913	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R914	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
R915	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R916	61048-277-270	R-METAL FILM:RM 1/4T 27-J	
T901	62829-501-121	TRANSFORMER:EI 66X30 220V	
ZD901	62169-502-002	DIODE ZENER:EQA 02-30C(R.T)	
ZD902	62169-403-870	DIODE-ZENER:EQA02-07A(FUJI)	
ZD906	62169-502-001	DIODE ZENER:EQA 02-06A(R.T)	
	69099-608-105	REMOCON ASSY:VX790(PR845)	
	69099-608-1057	REMOCON ASSY:VI-790	
	67644-600-610	DOOR BATTERY:ABS 94HB	
	64539-102-330	CERAMIC RESONATOR:CSB1216J	
C1	61407-117-120	C-CERAMIC.AXIAL:TAPG SL 50V 12-J	
C2	61407-117-120	C-CERAMIC.AXIAL:TAPG SL 50V 12-J	
C3	61609-402-100	C-ELECTROLYTIC:CE04W 50V 1M(SE)	
C4	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J	
C5	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J	
D9	62169-406-482	DIODE:1N4148 SAMSUNG	
DL1	62309-112-036	LED-IR:CL2	
DL2	62309-112-036	LED-IR:CL2	
IC1	62119-101-661	IC:M50930-124FP	
Q1	62139-103-381	TRANSISTOR:KSA 733-Y	
Q2	62139-302-741	TRANSISTOR:KSC 945-Y	
R1	61048-177-100	R-METAL FILM:RM 1/8TS 10-J	
R10	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R11	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R12	61048-177-105	R-METAL FILM:RM 1/8TS 1M-J	
R13	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
R14	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R15	61048-177-271	R-METAL FILM:RM 1/8TS 270-J	
R16	61048-177-183	R-METAL FILM:RM 1/8TS 18K-J	
R2	61048-177-100	R-METAL FILM:RM 1/8TS 10-J	
R3	61048-177-561	R-METAL FILM:RM 1/8TS 560-J	
R4	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R5	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R6	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R7	61048-177-333	R-METAL FILM:RM 1/8TS 33K-J	
R8	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
R9	61048-177-107	R-METAL FILM:RM 1/8TS 10M-J	
XC1	64539-021-010	CRYSTAL:P-3(32.768KHZ)	
	69881-603-203	ASSY F/TIMER:VX-790 G-8W PAL HI-FI	
	64529-312-040	REMOCON-MODULE:SBX 1483-52	
	62319-013-067	DIGITRON:FIP 12BGM7	
	69814-603-010	ASSY PHONE:G-8W PAL HI-FI	
C101	61407-101-360	C-CERAMIC.TEMP:CC45 SL TAPG 50V 100-J	
C102	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
C103	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
C104	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C105	61419-109-210	C-CERAMIC.HK:CK45F 50V 0.1M-Z	
C106	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C108	61417-104-260	C-CERAMIC.HK:CK45B TAPG 50V 680-K	
CN101	63349-604-010	CONNECTOR WAFER:53014-1010	S.N.A
CN102	63349-604-160	CONNECTOR WAFER:53014-0610	S.N.A
CN103	63349-604-140	CONNECTOR WAFER:53014-0410	S.N.A
CN104	63349-604-190	CONNECTOR WAFER:53014-0910	S.N.A
CN105	63349-604-130	CONNECTOR WAFER:53014-0310	S.N.A
CN109	63349-604-130	CONNECTOR WAFER:53014-0310	S.N.A
D103	62169-406-482	DIODE:1N4148 SAMSUNG	
D105	62169-406-482	DIODE:1N4148 SAMSUNG	
D106	62169-406-482	DIODE:1N4148 SAMSUNG	
D107	62169-406-482	DIODE:1N4148 SAMSUNG	
D108	62169-406-482	DIODE:1N4148 SAMSUNG	
D109	62169-406-482	DIODE:1N4148 SAMSUNG	
D110	62169-406-482	DIODE:1N4148 SAMSUNG	
D111	62169-406-482	DIODE:1N4148 SAMSUNG	
D112	62169-406-482	DIODE:1N4148 SAMSUNG	
D113	62169-406-482	DIODE:1N4148 SAMSUNG	
D114	62169-406-482	DIODE:1N4148 SAMSUNG	
D115	62169-406-482	DIODE:1N4148 SAMSUNG	
D116	62169-406-482	DIODE:1N4148 SAMSUNG	
D117	62169-406-482	DIODE:1N4148 SAMSUNG	
D118	62169-102-057	DIODE SHOTTKY:1SS108-TA	
D119	62169-102-057	DIODE SHOTTKY:1SS108-TA	
D1191	62169-102-057	DIODE SHOTTKY:1SS108-TA	
D120	62169-102-057	DIODE SHOTTKY:1SS108-TA	
D1201	62169-102-057	DIODE SHOTTKY:1SS108-TA	
D121	62169-102-057	DIODE SHOTTKY:1SS108-TA	
D1211	62169-102-057	DIODE SHOTTKY:1SS108-TA	
D123	62169-406-482	DIODE:1N4148 SAMSUNG	
DL101	62309-110-340	LED:GL-3HD7/GL3HD8	
DL102	62309-110-340	LED:GL-3HD7/GL3HD8	
DL104	62309-110-340	LED:GL-3HD7/GL3HD8	
IC101	62119-103-676	IC:MN1280-Q	
IC102	62119-101-338	IC:CAT93C46P	
IC103	62119-601-187	IC:TMP47C870N-4732	
R101	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R102	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R103	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R104	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R105	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R106	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
R107	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R108	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R113	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
SW10	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW102	63519-074-040	SW-SLIDE:KSA-2440A	
SW103	63519-073-021	SW-SLIDE:SSS 322	
SW104	63519-073-020	SW-SLIDE:SSS 323	
SW105	63519-073-021	SW-SLIDE:SSS 322	
SW107	63519-073-020	SW-SLIDE:SSS 323	
SW12	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW13	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW16	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW18	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW19	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW23	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW25	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW26	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW27	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW28	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW29	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW30	63599-016-070	SW-TACT:EVQ-QS2 05K	

* S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
SW31	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW32	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW33	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW34	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW35	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW36	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW38	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW39	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW40	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW41	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW42	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW43	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW44	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW45	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW46	63599-016-070	SW-TACT:EVQ-QS2 05K	
SW48	63599-016-070	SW-TACT:EVQ-QS2 05K	
VR101	61203-107-080	VR-ROUND:RK09K1130-500KB(17.5)	
VR102	61203-107-080	VR-ROUND:RK09K1130-500KB(17.5)	
VR103	61203-107-070	VR-ROUND:RK09K1130-20KB(17.5)	
VR104	61203-105-006	VR-ROUND:RK09K 1130-10KB	
VR105	61203-105-007	VR-SLIDE:RS30B221J10 KAX2	
XT101	64539-102-012	CERAMIC RESONATOR:FCR 4.0MC	
XT102	64539-021-010	CRYSTAL:P-3(32.768KHZ)	
		ASS'Y MAIN-C:VX/VI-790 PAL HI-FI AFM	
C700	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
C701	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C702	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C703	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C704	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C705	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C706	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C707	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C708	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C709	61407-101-160	C-CERAMIC.TEMP:CC45 SL TAPG 50V 15-J	
C710	61417-104-170	C-CERAMIC.HK:CK45B TAPG 50V 820-K	
C711	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C712	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C713	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C714	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C715	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C716	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C717	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C718	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C719	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C720	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C721	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C722	61407-101-170	C-CERAMIC.TEMP:CC45 SL TAPG 50V 150-J	
C723	61609-122-471	C-ELECTROLYTIC:CE04W 6.3V 470M(SS)	
C724	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C725	61507-121-511	C-POLTESTER:CQ921M TAPG 100V 0.022M-J	
C727	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C728	61407-101-480	C-CERAMIC.TEMP:CC45 SL TAPG 50V 330-J	
C729	61507-121-531	C-POLYESTER:CQ921M TAPG 50V 0.033M-J	
C730	61407-101-510	C-CERAMIC.TEMP:CC45 SL TAPG 50V 470-J	
C731	61417-104-260	C-CERAMIC.HK:CK45B TAPG 50V 680-K	
C732	61407-101-480	C-CERAMIC.TEMP:CC45 SL TAPG 50V 330-J	
C733	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C734	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C735	61507-121-551	C-POLYESTER:CQ921M TAPG 50V 0.047M-J	
C736	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C737	61609-401-110	C-ELECTROLYTIC:CE04W 10V 220M	
C738	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C739	61507-121-511	C-POLTESTER:CQ921M TAPG 100V 0.022M-J	
C740	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C741	61609-122-471	C-ELECTROLYTIC:CE04W 6.3V 470M(SS)	
C742	61407-101-170	C-CERAMIC.TEMP:CC45 SL TAPG 50V 150-J	
C743	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C744	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C745	61417-104-260	C-CERAMIC.HK:CK45B TAPG 50V 680-K	
C746	61407-101-480	C-CERAMIC.TEMP:CC45 SL TAPG 50V 330-J	
C747	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C748	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C749	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C750	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C751	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C752	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C753	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
C754	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C755	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M	
C756	61507-121-450	C-POLYESTER:CQ921M TAPG 50V 0.0068M-K	
C757	61507-121-460	C-POLYESTER:CQ921M TAPG 100V 0.0082M-K	
C759	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C760	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C761	61607-402-230	C-ELECTROLYTIC:CE04W TAPG 50V 3.3M	
C762	61607-402-220	C-ELECTROLYTIC:CE04W TAPG 50V 2.2M	
C763	61507-121-471	C-POLYESTER:CQ921M TAPG 50V 0.01M-J	
C764	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C765	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C766	61507-121-511	C-POLTESTER:CQ921M TAPG 100V 0.022M-J	
C767	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C768	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
C769	61507-121-531	C-POLYESTER:CQ921M TAPG 50V 0.033M-J	
C770	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C771	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C772	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C773	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C774	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C775	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C776	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C777	61507-121-531	C-POLYESTER:CQ921M TAPG 50V 0.033M-J	
C778	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
C779	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C780	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C781	61507-121-511	C-POLTESTER:CQ921M TAPG 100V 0.022M-J	
C782	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C783	61507-121-471	C-POLYESTER:CQ921M TAPG 50V 0.01M-J	
C784	61607-402-220	C-ELECTROLYTIC:CE04W TAPG 50V 2.2M	
C785	61607-402-230	C-ELECTROLYTIC:CE04W TAPG 50V 3.3M	
C786	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C787	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M	
C788	61507-121-450	C-POLYESTER:CQ921M TAPG 50V 0.0068M-K	
C789	61507-121-460	C-POLYESTER:CQ921M TAPG 100V 0.0082M-K	
C790	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
C791	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
C792	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C793	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
C794	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C795	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C796	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C797	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M	
C798	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C799	61607-402-220	C-ELECTROLYTIC:CE04W TAPG 50V 2.2M	
CN701	63349-601-320	CONNECTOR-WAFER:5233-03A	S.N.A
CN702	63349-601-325	CONNECTOR WAFER:5233-08A	S.N.A
CN703	63349-062-400	CONNECTOR-WAFER:5267-11A	S.N.A
CN704	63349-062-340	CONNECTOR-WAFER:5267-05A	S.N.A
CN705	63349-601-050	CONNECTOR WAFER:5234-06A	S.N.A
CN706	63349-062-310	CONNECTOR-WAFER:5267-02A	S.N.A
D701	62169-406-482	DIODE:1N4148 SAMSUNG	
D702	62169-406-482	DIODE:1N4148 SAMSUNG	
D703	62169-406-482	DIODE:1N4148 SAMSUNG	
D704	62169-406-482	DIODE:1N4148 SAMSUNG	
D705	62169-406-482	DIODE:1N4148 SAMSUNG	
D707	62169-406-482	DIODE:1N4148 SAMSUNG	
D708	62169-406-482	DIODE:1N4148 SAMSUNG	
D709	62169-406-482	DIODE:1N4148 SAMSUNG	
D710	62169-406-482	DIODE:1N4148 SAMSUNG	
FL701	62529-417-104	FILTER LC:SFB4049	
FL702	64529-431-190	FILTER LC:20KHZ LPF(TOKO)	
FL703	64529-431-190	FILTER LC:20KHZ LPF(TOKO)	
IC701	62119-401-158	IC:HA12124NT	
IC702	62119-401-159	IC:HA12123NT	
IC703	62119-103-681	IC:BU4053B	
IC704	62119-103-683	IC:BA7720S	
L701	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
L702	62427-812-681	COIL-PEAKING:EL 0606RA-681J(680UH)	
L703	62427-812-150	COIL-PEAKING:EL0606RA-150J(15UH) TAPG	
L704	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
L705	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
L706	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
L707	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
L708	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
L709	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
Q701	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q703	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q704	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q705	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q706	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q707	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q708	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q709	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q710	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q711	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q712	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q713	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q717	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q718	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
R701	61048-177-339	R-METAL FILM:RM 1/8TS 3.3-J	
R702	61048-177-183	R-METAL FILM:RM 1/8TS 18K-J	
R703	61048-177-689	R-METAL FILM:RM 1/8TS 6.8-J	
R704	61048-177-510	R-METAL FILM:RM 1/8TS 51-J	
R705	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R706	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R707	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R708	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R709	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	

* S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
R711	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R712	61048-177-339	R-METAL FILM:RM 1/8TS 3.3-J	
R713	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R714	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R715	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R716	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R717	61048-177-181	R-METAL FILM:RM 1/8TS 180-J	
R718	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
R719	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
R720	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R721	61048-177-912	R-METAL FILM:RM 1/8TS 9.1K	
R722	61048-177-303	R-METAL FILM:RM 1/8TS 30K-J	
R723	61048-177-163	R-METAL FILM:RM 1/8TS 16K-J	
R724	61048-177-303	R-METAL FILM:RM 1/8TS 30K-J	
R725	61048-177-303	R-METAL FILM:RM 1/8TS 30K-J	
R726	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R727	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R728	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R729	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R730	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R731	61048-177-163	R-METAL FILM:RM 1/8TS 16K-J	
R732	61048-177-752	R-METAL FILM:RM 1/8TS 7.5K-J	
R733	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R734	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R735	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R736	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R737	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R738	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R739	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R740	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R741	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R742	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R743	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R744	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R745	61048-177-225	R-METAL FILM:RM 1/8TS 2.2M-J	
R746	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
R747	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R748	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R749	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R750	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R751	61048-177-202	R-METAL FILM:RM 1/8TS 2K-J	
R752	61048-177-362	R-METAL FILM:RM 1/8TS 3.6K-J	
R753	61048-177-112	R-METAL FILM:RM 1/8TS 1.1K-J	
R754	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R755	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R756	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R757	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R758	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R759	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R760	61048-177-114	R-METAL FILM:RM 1/8TS 110K-J	
R761	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R762	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R763	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R764	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R765	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R766	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R767	61048-177-112	R-METAL FILM:RM 1/8TS 1.1K-J	
R768	61048-177-362	R-METAL FILM:RM 1/8TS 3.6K-J	
R769	61048-177-202	R-METAL FILM:RM 1/8TS 2K-J	
R770	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
R771	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R772	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R773	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R774	61048-177-225	R-METAL FILM:RM 1/8TS 2.2M-J	
R775	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
R776	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R777	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R779	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R780	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R781	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R783	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R784	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R785	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R786	61048-177-821	R-METAL FILM:RM 1/8TS 820-J	
R787	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R788	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
VR701	61246-105-473	VR-SEMI:RH0615C 47KB	
VR702	61246-105-473	VR-SEMI:RH0615C 47KB	
VR703	61246-105-473	VR-SEMI:RH0615C 47KB	
VR704	61246-105-473	VR-SEMI:RH0615C 47KB	
VR705	61246-105-474	VR-SEMI:RH0615C 470KB	
VR706	61246-105-103	VR-SEMI:RH0615C 10KB	
VR707	61246-105-103	VR-SEMI:RH0615C 10KB	
	69812-603-020	ASS'Y PRE-AMP:4HEAD HI-FI	
CB1	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CB10	61417-109-200	C-CERAMIC.HK:CK45F TAPG 50V 0.047M-Z	
CB11	61407-101-290	C-CERAMIC.TEMP:CC45 SL TAPG 50V 56-J	
CB12	61407-101-290	C-CERAMIC.TEMP:CC45 SL TAPG 50V 56-J	
CB13	61417-109-200	C-CERAMIC.HK:CK45F TAPG 50V 0.047M-Z	
CB14	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CB15	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
CB16	61407-105-250	C-CERAMIC.TEMP:CC45 CH TAPG 50V 39-J	
CB17	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CB18	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CB19	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
CB2	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
CB20	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CB21	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CB22	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CB23	61417-109-210	C-CERAMIC.HK:CK45F TAPG 50V 0.1M-Z	
CB24	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CB25	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CB26	61417-109-200	C-CERAMIC.HK:CK45F TAPG 50V 0.047M-Z	
CB27	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CB28	61407-101-420	C-CERAMIC.TEMP:CC45 SL TAPG 50V 180-J	
CB29	61407-105-300	C-CERAMIC.TEMP:CC45 CH TAPG 50V 68-J	
CB3	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CB30	61407-101-403	C-CERAMIC.TEMP:CC45 SL TAPG 50V 47-J	
CB31	61407-101-360	C-CERAMIC.TEMP:CC45 SL TAPG 50V 100-J	
CB32	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
CB4	61417-109-200	C-CERAMIC.HK:CK45F TAPG 50V 0.047M-Z	
CB5	61407-105-300	C-CERAMIC.TEMP:CC45 CH TAPG 50V 68-J	
CB6	61407-105-300	C-CERAMIC.TEMP:CC45 CH TAPG 50V 68-J	
CB7	61417-109-200	C-CERAMIC.HK:CK45F TAPG 50V 0.047M-Z	
CB8	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CB9	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CNB1	63349-601-131	CONNECTOR-WAFER:5234-12A	S.N.A
CNB2	63349-067-018	CONNECTOR-HOUSING:5513-8APB	S.N.A
CNB3	63349-601-058	CONNECTOR WAFER:5234-06A	S.N.A
CNB4	63349-067-048	CONNECTOR-HOUSING:5513-04 APB	S.N.A
ICB1	62119-103-627	IC:BA7254S(4CH PRE/REC AMP)	
LB1	62427-812-560	COIL-PEAKING:EL0606RA-560J(56UH) TAPG	
LB2	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
LB3	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
LB4	62427-812-100	COIL-PEAKING:EL0606RA-100J(10UH) TAPG	
LB5	62427-812-181	COIL-PEAKING:EL0606RA 181-J(180UH) TAPG	
LB6	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
QB1	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QB2	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
QB3	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
QB4	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
RB1	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RB10	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
RB11	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
RB12	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RB13	61048-177-910	R-MERAL FILM:RM 1/8TS 91-J	
RB14	61048-177-561	R-METAL FILM:RM 1/8TS 560-J	
RB15	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RB16	61048-177-820	R-METAL FILM:RM 1/8TS 82-J	
RB17	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
RB18	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
RB19	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RB2	61048-177-100	R-METAL FILM:RM 1/8TS 10-J	
RB20	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
RB21	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RB3	61048-177-100	R-METAL FILM:RM 1/8TS 10-J	
RB4	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RB5	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RB6	61048-177-100	R-METAL FILM:RM 1/8TS 10-J	
RB7	61048-177-100	R-METAL FILM:RM 1/8TS 10-J	
RB8	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RB9	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
VRB1	61246-106-222	VR-SEMI:RH0614C 2.2KB	
VRB2	61246-106-222	VR-SEMI:RH0614C 2.2KB	
	69813-603-030	AS'Y TUNER:B/G MTS VX-790 PAL HI-FI	
	66463-602-620	CONNECTOR-BOARD A:HIPS 94HB	S.N.A
	62569-002-221	RF CONVERTER:MDLK3D393A	
	63054-401-670	CABLE-COAXIAL ASSY:UL 865AWG 308LK100AA	
	64519-903-130	TUNER-IF UINT:FE FB-0199 CCIR98CH	
CA0	61419-104-680	C-CERAMIC.HK:CK45B 50V 0.0068M-K	
CA1	61607-402-220	C-ELECTROLYTIC:CE04W TAPG 50V 2.2M	
CA10	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CA11	61507-121-530	C-POLYESTER:CQ921M TAPG 100V 0.033M-K	
CA12	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CA13	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CA14	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CA15	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CA16	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CA17	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CA18	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CA19	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	

* S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
CA2	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CA20	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CA21	61607-134-479	C-ELECTROLYTIC:CE04W TAPG 50V 4.7M(RSS)	
CA3	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CA4	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
CA5	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CA6	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CA7	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CA8	61507-121-530	C-POLYESTER:CQ921M TAPG 100V 0.033M-K	
CA9	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CNA1	63349-601-323	CONNECTOR-WAFER:5233-06A	S.N.A
CNA2	63349-601-322	CONNECTOR-WAFER:5233-05A	S.N.A
CNA3	63349-062-320	CONNECTOR-WAFER:5267-03A	S.N.A
DA1	62169-406-482	DIODE:1N4148 SAMSUNG	
DA2	62169-406-482	DIODE:1N4148 SAMSUNG	
DA3	62169-406-482	DIODE:1N4148 SAMSUNG	
DA4	62169-406-482	DIODE:1N4148 SAMSUNG	
DA5	62169-406-482	DIODE:1N4148 SAMSUNG	
DA6	62169-406-482	DIODE:1N4148 SAMSUNG	
DA7	62169-406-482	DIODE:1N4148 SAMSUNG	
DA8	62119-501-560	IC-L:KA33V	
ICA1	62119-103-602	IC:BA718	
ICA2	62119-401-171	IC:BU4052B	
LA1	62427-812-100	COIL-PEAKING:EL0606RA-100J(10UH) TAPG	
LA2	62427-812-100	COIL-PEAKING:EL0606RA-100J(10UH) TAPG	
LA3	62427-812-100	COIL-PEAKING:EL0606RA-100J(10UH) TAPG	
LA4	62427-812-100	COIL-PEAKING:EL0606RA-100J(10UH) TAPG	
LA5	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
QA1	62137-701-011	TRANSISTOR:KSR 1002 TAPG	
QA3	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QA4	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
RA1	61048-277-561	R-METAL FILM:RM 1/4T 560-J	
RA10	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA11	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
RA12	61048-177-683	R-METAL FILM:RM 1/8TS 68K-J	
RA13	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
RA14	61048-177-273	R-METAL FILM:RM 1/8TS 27K-J	
RA15	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RA16	61048-177-683	R-METAL FILM:RM 1/8TS 68K-J	
RA17	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
RA18	61048-177-273	R-METAL FILM:RM 1/8TS 27K-J	
RA19	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RA2	61048-277-561	R-METAL FILM:RM 1/4T 560-J	
RA20	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA21	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA22	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA24	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RA25	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
RA3	61048-177-563	R-METAL FILM:RM 1/8TS 56K-J	
RA4	61048-177-563	R-METAL FILM:RM 1/8TS 56K-J	
RA5	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA6	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA7	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA8	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA9	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
VRA1	61246-105-223	VR-SEMI:RH0615C 22KB	
VRA2	61246-105-103	VR-SEMI:RH0615C 10KB	
VRA3	61246-105-222	VR-SEMI:RH0615C 2.2KB	
VRA4	61246-105-222	VR-SEMI:RH0615C 2.2KB	
	69852-603-001	ASSY-MAIN D:VX-790 PAL HI-FI PIP	
	69852-603-002	ASSY-MAIN D:VI-790 PAL HI-FI PIP	
CG1	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J	
CG10	61607-134-014	C-ELECTROLYTIC:CE04W TAPG 50V 0.1M	
CG101	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG102	61407-101-290	C-CERAMIC.TEMP:CC45 SL TAPG 50V 56-J	
CG103	61407-101-290	C-CERAMIC.TEMP:CC45 SL TAPG 50V 56-J	
CG105	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG106	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG107	61407-101-290	C-CERAMIC.TEMP:CC45 SL TAPG 50V 56-J	
CG108	61407-101-290	C-CERAMIC.TEMP:CC45 SL TAPG 50V 56-J	
CG11	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J	
CG110	61419-222-332	C-CERAMIC HK:CK 45B 50V 0.0033-K	
CG111	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG112	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG12	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CG123	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG124	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG125	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG126	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG127	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG128	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG129	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG13	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CG130	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG131	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG132	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J	
CG133	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
CG134	61407-101-460	C-CERAMIC.TEMP:CC45 SL TAPG 50V 270-J	
CG135	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG136	61407-105-350	C-CERAMIC TEMP:CC45 CH TAPG 50V 30-J	
CG137	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG138	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG139	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG14	61507-121-510	C-POLYESTER:CQ921M TAPG 100V 0.022M-K	
CG140	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG141	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J	
CG142	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG143	61407-105-360	C-CERAMIC.TEMP:CC45 CH TAPG 50V 43-J	
CG144	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG145	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG146	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG147	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG15	61509-121-350	C-POLYESTER:CQ921M 100V 0.0012M-K	
CG151	61409-101-420	C-CERAMIC.TEMP:CC45 SL 50V 180-J	
CG152	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG153	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG156	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG157	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG158	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG159	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG16	61407-105-300	C-CERAMIC.TEMP:CC45 CH TAPG 50V 68-J	
CG160	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG161	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
CG162	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG163	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG164	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG165	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG166	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG167	61507-121-370	C-POLYESTER:CQ921M TAPG 100V 0.0018M-K	
CG168	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
CG17	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
CG170	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
CG171	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
CG172	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
CG173	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG174	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG175	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG176	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG177	61407-105-350	C-CERAMIC TEMP:CC45 CH TAPG 50V 30-J	
CG178	61407-105-350	C-CERAMIC TEMP:CC45 CH TAPG 50V 30-J	
CG18	61507-121-340	C-POLYESTER:CQ921M TAPG 100V 0.001M-K	
CG19	61407-101-140	C-CERAMIC.TEMP:CC45 SL TAPG 50V 12-J	
CG2	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
CG20	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
CG21	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
CG22	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG23	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG24	61609-803-224	C-ELECTROLYTIC.NP:CE04W 16V 22M(NS)	
CG25	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG26	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG27	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG28	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG29	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG3	61407-101-490	C-CERAMIC.TEMP:CC45 SL TAPG 50V 390-J	
CG30	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG31	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG32	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG33	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
CG34	61417-109-210	C-CERAMIC.HK:CK45F TAPG 50V 0.1M-Z	
CG35	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG36	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG37	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
CG38	61417-109-210	C-CERAMIC.HK:CK45F TAPG 50V 0.1M-Z	
CG39	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG4	61507-121-251	C-POLYESTER:CQ921M TAPG 100V 0.0027M-J	
CG40	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG41	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG42	61407-105-120	C-CERAMIC.TEMP:CC45 CH TAPG 50V 120-J	
CG43	61407-101-460	C-CERAMIC.TEMP:CC45 SL TAPG 50V 270-J	
CG44	61407-105-120	C-CERAMIC.TEMP:CC45 CH TAPG 50V 120-J	
CG45	61607-803-120	C-ELECTROLYTIC.NP:CE04W TAPG 16V 10M	
CG46	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG47	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG48	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG49	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG5	61507-121-411	C-POLYESTER:CQ921M TAPG 100V 0.0033M-J	
CG51	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CG52	61507-121-450	C-POLYESTER:CQ921M TAPG 50V 0.0068M-K	
CG53	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J	
CG54	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
CG55	61507-121-440	C-POLYESTER:CQ921M TAPG 100V 0.0056M-K	
CG57	61509-121-350	C-POLYESTER:CQ921M 100V 0.0012M-K	
CG58	61417-104-282	C-CERAMIC.HK:CK45B TAPG 50V 0.001M-K	
CG59	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
CG6	61509-121-350	C-POLYESTER:CQ921M 100V 0.0012M-K	
CG60	61607-134-022	C-ELECTROLYTIC:CE04W TAPG 50V 0.22M RSS	

• S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
CG61	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CG62	61507-121-510	C-POLYESTER:CQ921M TAPG 100V 0.022M-K	
CG63	61509-121-350	C-POLYESTER:CQ921M 100V 0.0012M-K	
CG64	61407-105-300	C-CERAMIC.TEMP:CC45 CH TAPG 50V 68-J	
CG65	61607-402-220	C-ELECTROLYTIC:CE04W TAPG 50V 2.2M	
CG66	61507-121-530	C-POLYESTER:CQ921M TAPG 100V 0.033M-K	
CG67	61407-105-180	C-CERAMIC.TEMP:CC45 CH TAPG 50V 22-J	
CG68	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
CG69	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
CG7	61417-104-282	C-CERAMIC.HK:CK45B TAPG 50V 0.001M-K	
CG70	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG71	61607-803-210	C-ELECTROLYTIC.NP:CE04W TAPG 50V 1M	
CG72	61417-109-050	C-CERAMIC HK:CK45B TAPG 50V 0.0022M-K	
CG73	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J	
CG74	61407-101-360	C-CERAMIC.TEMP:CC45 SL TAPG 50V 100-J	
CG75	61407-101-360	C-CERAMIC.TEMP:CC45 SL TAPG 50V 100-J	
CG78	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG79	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG80	61607-122-100	C-ELECTROLYTIC:CE04W TAPG 16V 10M(RSS)	
CG81	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG83	61407-101-290	C-CERAMIC.TEMP:CC45 SL TAPG 50V 56-J	
CG84	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG85	61417-109-200	C-CERAMIC.HK:CK45F TAPG 50V 0.047M-Z	
CG86	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG87	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG88	61607-402-200	C-ELECTROLYTIC:CE04W TAPG 50V 0.47M	
CG89	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG9	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
CG90	61407-105-160	C-CERAMIC.TEMP:CC45 CH TAPG 50V 18-J	
CG91	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG92	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	
CG93	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG94	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG95	61407-105-250	C-CERAMIC.TEMP:CC45 CH TAPG 50V 39-J	
CG96	61609-803-222	C-ELECTROLYTIC NP:CE04W 50V 2.2M(NS)	
CG98	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CG99	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CNG1	63349-601-325	CONNECTOR WAFER:5233-08A	S.N.A
CNG2	63349-601-321	CONNECTOR-WAFER:5233-04A	S.N.A
DG1	62169-406-482	DIODE:1N4148 SAMSUNG	
DG10	62169-102-057	DIODE SHOTTKY:1SS108-TA	
DG11	62169-406-482	DIODE:1N4148 SAMSUNG	
DG12	62169-406-482	DIODE:1N4148 SAMSUNG	
DG15	62169-406-482	DIODE:1N4148 SAMSUNG	
DG2	62169-406-482	DIODE:1N4148 SAMSUNG	
DG4	62169-406-482	DIODE:1N4148 SAMSUNG	
DG5	62169-406-482	DIODE:1N4148 SAMSUNG	
DG6	62169-406-482	DIODE:1N4148 SAMSUNG	
DG7	62169-406-482	DIODE:1N4148 SAMSUNG	
DG8	62169-406-482	DIODE:1N4148 SAMSUNG	
FG1	64529-417-113	FILTER EMI:ZJSR 5101-102	
FG2	64529-417-113	FILTER EMI:ZJSR 5101-102	
FG3	64529-417-113	FILTER EMI:ZJSR 5101-102	
FLG2	64529-431-101	FILTER-LC:Q0138-C (3M LPF)	
ICG1	62119-101-340	IC:HA11535MP(Y/C MIXER)	
ICG10	62119-101-344	IC:HA11544 (SWITCHING)	
ICG11	62119-103-681	IC:BU4053B	
ICG12	62119-101-343	IC:HA19216P(A/D CONVERTER)	
ICG13	62119-103-692	IC:AN6308	
ICG14	62109-201-461	IC:MN74HC132	
ICG15	62109-201-461	IC:MN74HC132	
ICG16	62119-101-333	IC:HG61H25 R70F	
ICG17	62119-101-345	IC:HM53461-10(MEMORY)	
ICG18	62119-101-345	IC:HM53461-10(MEMORY)	
ICG19	62119-601-183	IC:MC7805C SST	
ICG2	62119-103-692	IC:AN6308	
ICG3	62119-103-692	IC:AN6308	
ICG4	62109-201-304	IC:TC74HC4066P	
ICG5	62109-104-930	IC:UPD 4013C/TC4013BP	
ICG6	62119-101-341	IC:HA11536MP(DECODER)	
ICG7	62119-101-342	IC:HA11883MP(ENCODER)	
LG1	62427-812-187	COIL-PEAKING:EL606RA-120J(12UH) TAPG	
LG10	62427-812-187	COIL-PEAKING:EL606RA-120J(12UH) TAPG	
LG11	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG12	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG13	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG14	62427-812-270	COIL-PEAKING:EL0606RA-270J(27UH) TAPG	
LG15	62427-812-680	COIL-PEAKING:EL0606RA-680J(68UH) TAPG	
LG16	62427-812-561	COIL-PEAKING:EL0606RA-561J(560UH)TAPG	
LG17	62427-812-561	COIL-PEAKING:EL0606RA-561J(560UH)TAPG	
LG19	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG2	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG21	64519-903-147	FERRITE BEADS:BL02RN2-R62	
LG22	64519-903-147	FERRITE BEADS:BL02RN2-R62	
LG23	64519-903-147	FERRITE BEADS:BL02RN2-R62	
LG24	64519-903-147	FERRITE BEADS:BL02RN2-R62	
LG25	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG3	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG4	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG5	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG6	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAPG	
LG7	62427-812-181	COIL-PEAKING:EL0606RA 181-J(180UH) TAPG	
LG8	62427-812-221	COIL-PEAKING:EL0606RA-221J(220UH) TAPG	
QG10	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG11	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG12	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG13	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG14	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG15	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG16	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG17	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG19	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG2	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG20	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG21	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG22	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG23	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG24	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG25	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG26	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG27	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG29	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG3	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG30	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG31	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG32	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG34	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG35	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG36	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG37	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG38	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG39	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG4	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG41	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG46	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
QG47	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG49	62137-701-013	TRANSISTOR:KSR 1004 TAPG	
QG5	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG6	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
QG7	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
QG8	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
QG9	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
RG1	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
RG10	61048-177-225	R-METAL FILM:RM 1/8TS 2.2M-J	
RG100	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG101	61048-177-151	R-METAL FILM:RM 1/8TS 150-J	
RG102	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG103	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
RG104	61048-177-821	R-METAL FILM:RM 1/8TS 820-J	
RG105	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
RG106	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG107	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG108	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG109	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG11	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
RG110	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG111	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
RG112	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RG113	61048-177-123	R-METAL FILM:RM 1/8TS 12K-J	
RG114	61048-177-470	R-METAL FILM:RM 1/8TS 47-J	
RG116	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG117	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG118	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG119	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG12	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
RG120	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG121	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
RG122	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG123	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG124	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG125	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG126	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG127	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG128	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG129	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG130	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG131	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG132	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG133	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG134	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
RG135	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG136	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
RG137	61048-177-123	R-METAL FILM:RM 1/8TS 12K-J	
RG138	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
RG139	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG14	61048-177-224	R-METAL FILM:RM 1/8TS 220K-J	
RG140	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
RG141	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	

*S.N.A ; SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
RG142	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
RG143	61048-177-333	R-METAL FILM:RM 1/8TS 33K-J	
RG144	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG145	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG146	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG147	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG148	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG15	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
RG152	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG16	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RG160	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
RG166	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
RG167	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
RG168	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG169	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
RG17	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
RG170	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG171	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
RG172	61048-177-392	R-METAL FILM:RM 1/8TS 3.9K-J	
RG173	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
RG174	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG175	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
RG176	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG177	61048-177-750	R-METAL FILM:RM 1/8TS 75-J	
RG178	61048-177-392	R-METAL FILM:RM 1/8TS 3.9K-J	
RG179	61048-177-751	R-METAL FILM:RM 1/8TS 750-J	
RG18	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
RG180	61048-177-391	R-METAL FILM:RM 1/8TS 390-J	
RG181	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG182	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG183	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG184	61048-177-822	R-METAL FILM:RM 1/8TS 8.2K-J	
RG185	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
RG186	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG187	61048-177-750	R-METAL FILM:RM 1/8TS 75-J	
RG188	61048-177-751	R-METAL FILM:RM 1/8TS 750-J	
RG189	61048-177-392	R-METAL FILM:RM 1/8TS 3.9K-J	
RG19	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
RG190	61048-177-561	R-METAL FILM:RM 1/8TS 560-J	
RG191	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
RG192	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
RG193	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
RG196	61048-177-105	R-METAL FILM:RM 1/8TS 1M-J	
RG197	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG198	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG2	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RG20	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
RG200	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG201	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
RG202	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
RG203	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
RG204	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG21	61048-177-391	R-METAL FILM:RM 1/8TS 390-J	
RG22	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG23	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG24	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG25	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
RG26	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
RG27	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG28	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG29	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG3	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RG30	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG31	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
RG32	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG33	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
RG34	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
RG35	61048-177-334	R-METAL FILM:RM 1/8TS 330K-J	
RG36	61048-177-561	R-METAL FILM:RM 1/8TS 560-J	
RG37	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
RG37	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
RG38	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG39	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RG4	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG40	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
RG41	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
RG42	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
RG43	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
RG44	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
RG45	61048-177-271	R-METAL FILM:RM 1/8TS 270-J	
RG46	61048-177-121	R-METAL FILM:RM 1/8TS 120-J	
RG47	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG48	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG49	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG5	61048-177-124	R-METAL FILM:RM 1/8TS 120K-J	
RG50	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG51	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG52	61048-177-224	R-METAL FILM:RM 1/8TS 220K-J	
RG53	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG54	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
RG55	61048-177-271	R-METAL FILM:RM 1/8TS 270-J	
RG56	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG57	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RG58	61048-177-683	R-METAL FILM:RM 1/8TS 68K-J	
RG59	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
RG6	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
RG60	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
RG61	61048-177-822	R-METAL FILM:RM 1/8TS 8.2K-J	
RG62	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG63	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
RG66	61048-177-470	R-METAL FILM:RM 1/8TS 47-J	
RG67	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
RG68	61048-177-225	R-METAL FILM:RM 1/8TS 2.2M-J	
RG69	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RG7	61048-177-822	R-METAL FILM:RM 1/8TS 8.2K-J	
RG70	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
RG71	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
RG72	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
RG73	61048-177-391	R-METAL FILM:RM 1/8TS 390-J	
RG74	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
RG75	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG76	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG77	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RG78	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RG79	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
RG81	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
RG82	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
RG85	61048-177-392	R-METAL FILM:RM 1/8TS 3.9K-J	
RG86	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
RG87	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
RG88	61048-177-333	R-METAL FILM:RM 1/8TS 33K-J	
RG89	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
RG9	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
RG90	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
RG91	61048-177-112	R-METAL FILM:RM 1/8TS 1.1K-J	
RG92	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
RG93	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
RG94	61048-177-183	R-METAL FILM:RM 1/8TS 18K-J	
RG95	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
RG96	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
RG97	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
RG98	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
RG99	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
RNG1	61068-101-082	R-MODULE:RKM 8L751J SIP 8P	
RNG2	61069-611-100	R-MODULE:RKM 8L502J SIP 8P	
RNG3	61069-611-100	R-MODULE:RKM 8L502J SIP 8P	
VCG2	61829-301-091	C-TRIMER:ECV-1ZW 20X65	
VCG3	61829-301-091	C-TRIMER:ECV-1ZW 20X65	
VRG11	61246-105-223	VR-SEMI:RH0615C 22KB	
VRG13	61246-105-471	VR-SEMI:RH0615C 470B	
VRG14	61246-105-471	VR-SEMI:RH0615C 470B	
VRG2	61246-105-102	VR-SEMI:RH0615C 1KB	
VRG3	61246-105-102	VR-SEMI:RH0615C 1KB	
VRG4	61246-105-103	VR-SEMI:RH0615C 10KB	
VRG6	61246-105-102	VR-SEMI:RH0615C 1KB	
VRG8	61246-105-103	VR-SEMI:RH0615C 10KB	
VRG9	61246-105-103	VR-SEMI:RH0615C 10KB	
XG1	64539-102-320	CERAMIC RESONATOR:CSB500F2	
XG2	64539-012-040	CRYSTAL:4.433619MHZ	
XG2	64539-102-320	CERAMIC RESONATOR:CSB500F2	
XG4	64539-012-040	CRYSTAL:4.433619MHZ	
XG6	64539-102-338	CERAMIC RESONATOR:CST4.4MGW040	
CG104	61607-401-450	C-ELECTROLYTIC:CE04W TAPG 16V 33M	OPTION
CG109	61407-101-480	C-CERAMIC.TEMP:CC45 SL TAPG 50V 330-J	OPTION
CG113	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	OPTION
CG114	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	OPTION
CG115	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	OPTION
CG116	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	OPTION
CG117	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	OPTION
CG118	61607-401-450	C-ELECTROLYTIC:CE04W TAPG 16V 33M	OPTION
CG119	61417-104-282	C-CERAMIC.HK:CK45B TAPG 50V 0.001M-K	OPTION
CG121	61607-122-470	C-ELECTROLYTIC:CE04W TAPG 16V 47M(RSS)	OPTION
CG122	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	OPTION
CG8	61417-104-282	C-CERAMIC.HK:CK45B TAPG 50V 0.001M-K	OPTION
FLG1	62429-014-112	COIL-TRAP(1/2FH):7.8K TUNING-COIL	OPTION
ICG8	62109-104-960	IC:TC4066BP/UPD 4066BC	OPTION
ICG9	62119-103-694	IC:BA7025L	OPTION
LG18	62427-813-101	COIL-PEAKING:EL0607RA-101K(100UH) TAP	OPTION
QG1	62137-103-380	TRANSISTOR:KSA 733 Y TAPG	OPTION
QG28	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	OPTION
QG33	62137-302-740	TRANSISTOR:KSC 945 Y TAPG	OPTION
RG115	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	OPTION
RG149	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	OPTION
RG150	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	OPTION
RG151	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	OPTION
RG153	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	OPTION
RG154	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	OPTION
RG155	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	OPTION

* S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
RG156	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	OPTION
RG157	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	OPTION
RG158	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	OPTION
RG159	61048-177-154	R-METAL FILM:RM 1/8TS 150K-J	OPTION
RG161	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	OPTION
RG162	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	OPTION
RG163	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	OPTION
RG164	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	OPTION
RG165	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	OPTION
RG8	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	OPTION
XG5	64529-310-010	FILTER-CERAMIC:SFE 4.5MB	OPTION
	69857-603-005	ASSY MAIN A;VX-790 PAL HI-FI V/IO	
		AUDIO PART :I/O MAIN PARTS	
CE01	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE02	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE03	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE04	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE05	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
CE06	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CE07	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CE08	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CE09	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
CE10	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
CE11	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
CE12	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CE13	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CE14	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CE15	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
CE16	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CE17	61417-109-210	C-CERAMIC.HK:CK45F TAPG 50V 0.1M-Z	
CE18	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CE19	61417-109-210	C-CERAMIC.HK:CK45F TAPG 50V 0.1M-Z	
CE20	61607-402-220	C-ELECTROLYTIC:CE04W TAPG 50V 2.2M	
CE21	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE22	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE23	61607-402-220	C-ELECTROLYTIC:CE04W TAPG 50V 2.2M	
CE24	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
CE25	61607-402-220	C-ELECTROLYTIC:CE04W TAPG 50V 2.2M	
CE26	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE29	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE30	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE31	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE32	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
CE33	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
CE34	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
CE35	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
CE36	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
CE37	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
CE38	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE39	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CE40	61417-109-050	C-CERAMIC HK:CK45B TAPG 50V 0.0022M-K	
CE41	61417-109-050	C-CERAMIC HK:CK45B TAPG 50V 0.0022M-K	
CE42	61417-109-050	C-CERAMIC HK:CK45B TAPG 50V 0.0022M-K	
CE43	61417-109-050	C-CERAMIC HK:CK45B TAPG 50V 0.0022M-K	
CE44	61417-109-050	C-CERAMIC HK:CK45B TAPG 50V 0.0022M-K	
CE45	61417-109-050	C-CERAMIC HK:CK45B TAPG 50V 0.0022M-K	
CE46	61417-109-050	C-CERAMIC HK:CK45B TAPG 50V 0.0022M-K	
CE47	61417-109-050	C-CERAMIC HK:CK45B TAPG 50V 0.0022M-K	
CE48	61607-402-220	C-ELECTROLYTIC:CE04W TAPG 50V 2.2M	
CE49	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M	
DE01	62169-406-482	DIODE;1N4148 SAMSUNG	
DE02	62169-406-482	DIODE;1N4148 SAMSUNG	
DE03	62169-406-482	DIODE;1N4148 SAMSUNG	
DE04	62169-406-482	DIODE;1N4148 SAMSUNG	
DE06	62169-406-482	DIODE;1N4148 SAMSUNG	
ICE01	62119-103-684	IC;BA7730S	
ICE02	62119-103-681	IC;BU4053B	
ICE03	62119-103-693	IC;BA7021	
LE01	62427-813-101	COIL-PEAKING;EL0607RA-101K(100UH) TAPG	
LE02	62427-813-101	COIL-PEAKING;EL0607RA-101K(100UH) TAPG	
LE04	62427-813-101	COIL-PEAKING;EL0607RA-101K(100UH) TAPG	
QE01	62149-401-265	TRANSISTOR;2SD 1468-Q	
QE02	62149-401-265	TRANSISTOR;2SD 1468-Q	
QE03	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
QE04	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
QE05	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
QE07	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
QE08	62149-401-265	TRANSISTOR;2SD 1468-Q	
QE09	62149-401-265	TRANSISTOR;2SD 1468-Q	
QE10	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
QE11	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
QE13	62137-701-022	TRANSISTOR;KSR 2003 TAPG	
RE01	61048-177-183	R-METAL FILM;RM 1/8TS 18K-J	
RE02	61048-177-474	R-METAL FILM;RM 1/8TS 470K-J	
RE03	61048-177-183	R-METAL FILM;RM 1/8TS 18K-J	
RE04	61048-177-474	R-METAL FILM;RM 1/8TS 470K-J	
RE05	61048-177-392	R-METAL FILM;RM 1/8TS 3.9K-J	
RE06	61048-177-112	R-METAL FILM;RM 1/8TS 1.1K-J	
RE07	61048-177-392	R-METAL FILM;RM 1/8TS 3.9K-J	
RE08	61048-177-112	R-METAL FILM;RM 1/8TS 1.1K-J	
RE09	61048-177-750	R-METAL FILM;RM 1/8TS 75-J	
RE10	61048-177-750	R-METAL FILM;RM 1/8TS 75-J	
RE11	61048-177-682	R-METAL FILM;RM 1/8TS 6.8K-J	
RE12	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
RE13	61048-177-682	R-METAL FILM;RM 1/8TS 6.8K-J	
RE14	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
RE15	61048-177-823	R-METAL FILM;RM 1/8TS 82K-J	
RE16	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
RE17	61048-177-823	R-METAL FILM;RM 1/8TS 82K-J	
RE18	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
RE19	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
RE20	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
RE21	61048-177-101	R-METAL FILM;RM 1/8TS 100-J	
RE22	61048-177-101	R-METAL FILM;RM 1/8TS 100-J	
RE23	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J	
RE24	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J	
RE25	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J	
RE26	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J	
RE27	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
RE28	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
RE29	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
RE30	61048-177-153	R-METAL FILM;RM 1/8TS 15K-J	
RE31	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
RE32	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
RE33	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
RE34	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J	
RE35	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J	
RE36	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J	
RE37	61048-177-392	R-METAL FILM;RM 1/8TS 3.9K-J	
RE39	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
RE40	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
RE41	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J	
RE42	61048-177-183	R-METAL FILM;RM 1/8TS 18K-J	
RE43	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J	
RE44	61048-177-183	R-METAL FILM;RM 1/8TS 18K-J	
RE45	61048-177-471	R-METAL FILM;RM 1/8TS 470-J	
RE46	61048-177-682	R-METAL FILM;RM 1/8TS 6.8K-J	
RE47	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
RE48	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
RE49	61048-177-752	R-METAL FILM;RM 1/8TS 7.5K-J	
RE51	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
RE53	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J	
RE54	61048-177-101	R-METAL FILM;RM 1/8TS 100-J	
RE55	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J	
RE56	61048-177-101	R-METAL FILM;RM 1/8TS 100-J	
RE57	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J	
RE58	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
RE60	61049-327-680	R-METAL OXIDE;RS 2P 68-J	
RE61	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
RE62	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
RE63	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
VRE01	61246-105-472	VR-SEMI;RH0615C 4.7KB	
VRE02	61246-105-472	VR-SEMI;RH0615C 4.7KB	
		VIDEO PART :PAL G-8 HI-FI	
C302	61407-101-510	C-CERAMIC.TEMP:CC45 SL TAPG 50V 470-J	
C305	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C306	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C308	61507-121-371	C-POLYESTER:CQ921M TAPG 50V 0.0018M-J	
C309	61607-134-033	C-ELECTROLYTIC:CE04W TAPG 50V 0.33M(SV)	
C310	61407-101-391	C-CERAMIC.TEMP:CC45 SL TAPG 50V 391-J	
C311	61407-101-160	C-CERAMIC.TEMP:CC45 SL TAPG 50V 15-J	
C312	61407-101-483	C-CERAMIC.TEMP:CC45 SL TAPG 50V 47-J	
C314	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C316	61407-101-360	C-CERAMIC.TEMP:CC45 SL TAPG 50V 100-J	
C317	61607-402-230	C-ELECTROLYTIC:CE04W TAPG 50V 3.3M	
C321	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C323	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C324	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C326	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C328	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C329	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C333	61407-101-490	C-CERAMIC.TEMP:CC45 SL TAPG 50V 390-J	
C334	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C335	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C336	61407-101-510	C-CERAMIC.TEMP:CC45 SL TAPG 50V 470-J	
C339	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C340	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C342	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C343	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C344	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C345	61407-105-850	C-CERAMIC.TEMP:CC45 CH TAPG 50V 8-D	
C346	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	

* S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK	LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
C347	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M		C460	61407-105-270	C-CERAMIC.TEMP:CC45 CH TAPG 50V 27-J	
C348	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z		C461	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C349	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D		C462	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C350	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J		C463	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C351	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		C464	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C352	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z		C465	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C353	61607-134-033	C-ELECTROLYTIC:CE04W TAPG 50V 0.33M(SV)		C466	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C354	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M		C467	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C355	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		C468	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C356	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		C469	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C357	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		C470	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C358	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		C471	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C359	61407-105-320	C-CERAMIC.TEMP:CC45 CH TAPG 50V 82-J		C472	61407-101-540	C-CERAMIC.TEMP:CC45 SL TAPG 50V 560-J	
C360	61407-105-270	C-CERAMIC.TEMP:CC45 CH TAPG 50V 27-J		C473	61407-101-540	C-CERAMIC.TEMP:CC45 SL TAPG 50V 560-J	
C361	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		C475	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C362	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M		C477	61507-121-520	C-POLYESTER:CQ921M TAPG 50V 0.027M-K	
C370	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M		C479	61407-105-250	C-CERAMIC.TEMP:CC45 CH TAPG 50V 39-J	
C371	61607-134-033	C-ELECTROLYTIC:CE04W TAPG 50V 0.33M(SV)		C480	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
C372	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z		C481	61507-121-491	C-POLYESTER:CQ921M TAPG 50V 0.018M-J	
C373	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		C483	61407-101-483	C-CERAMIC.TEMP:CC45 SL TAPG 50V 47-J	
C374	61507-121-510	C-POLYESTER:CQ921M TAPG 100V 0.022M-K		C485	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C378	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		C486	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C379	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		C487	61407-101-483	C-CERAMIC.TEMP:CC45 SL TAPG 50V 47-J	
C380	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		C488	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C382	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		C490	61407-105-250	C-CERAMIC.TEMP:CC45 CH TAPG 50V 39-J	
C383	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M		C493	61409-105-280	C-CERAMIC.TEMP:CC45 CH 50V 56-J	
C384	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		C494	61409-105-280	C-CERAMIC.TEMP:CC45 CH 50V 56-J	
C385	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z		C497	61407-101-480	C-CERAMIC.TEMP:CC45 SL TAPG 50V 330-J	
C386	61407-105-660	C-CERAMIC.TEMP:CC45 CH TAPG 50V 5-D		C498	61407-101-140	C-CERAMIC.TEMP:CC45 SL TAPG 50V 12-J	
C387	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		CN301	63349-601-329	CONNECTOR WAFER:5233-12A	S.N.A
C388	61609-401-110	C-ELECTROLYTIC:CE04W 10V 220M		CN302	63349-062-380	CONNECTOR-WAFER:5267-09A	S.N.A
C389	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		CN303	63349-062-390	CONNECTOR-WAFER:5267-10A	S.N.A
C390	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		CN304	63349-601-321	CONNECTOR-WAFER:5233-04A	S.N.A
C391	61507-121-551	C-POLYESTER:CQ921M TAPG 50V 0.047M-J		CN305	63349-601-324	CONNECTOR-WAFER:5233-07A	S.N.A
C392	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		CN306	63349-601-321	CONNECTOR-WAFER:5233-04A	S.N.A
C393	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		CN308	63349-062-310	CONNECTOR-WAFER:5267-02A	S.N.A
C394	61409-105-280	C-CERAMIC.TEMP:CC45 CH 50V 56-J		CN310	63349-065-040	CONNECTOR-WAFER:3094-4A	S.N.A
C395	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D		D302	62169-406-482	DIODE:1N4148 SAMSUNG	
C396	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		D304	62169-406-482	DIODE:1N4148 SAMSUNG	
C397	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		D308	62169-406-482	DIODE:1N4148 SAMSUNG	
C398	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M		D309	62169-406-482	DIODE:1N4148 SAMSUNG	
C399	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M		D310	62169-406-482	DIODE:1N4148 SAMSUNG	
C400	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M		D313	62169-406-482	DIODE:1N4148 SAMSUNG	
C401	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M		D314	62169-403-820	DIODE-ZENER:MTZ 3.9B TAPG	
C403	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		DL301	64569-006-011	DELAY LINE:MS-31PC-5K	
C404	61609-401-110	C-ELECTROLYTIC:CE04W 10V 220M		FL301	64529-401-200	FILTER-LC:SFB 4141	
C405	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J		FL302	64529-401-210	FILTER-LC:SEL 4473	
C406	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		FL305	62429-014-112	COIL-TRAP(1/2FH):7.8K TUNING-COIL	
C407	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		FL306	62429-014-127	COIL-TUNING:8.86 MHZ	
C408	61407-105-270	C-CERAMIC.TEMP:CC45 CH TAPG 50V 27-J		FL307	64529-431-070	FILTER-LC:SANG SHIN BP630 C-T	
C409	61407-101-360	C-CERAMIC.TEMP:CC45 SL TAPG 50V 100-J		IC301	62109-103-401	IC(HYBRID):EHM-X6W78Y07A	
C410	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		IC302	62109-103-402	IC(HYBRID):EHM-X6546Y08A	
C411	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		IC303	62119-103-691	IC:LA7328	
C412	61407-105-270	C-CERAMIC.TEMP:CC45 CH TAPG 50V 27-J		IC304	62119-103-692	IC:AN6308	
C413	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		IC305	62119-103-699	IC:MST001RS	
C414	61407-101-160	C-CERAMIC.TEMP:CC45 SL TAPG 50V 15-J		IC306	62119-103-696	IC:MSM6967RS	
C415	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		IC308	62119-103-697	IC:MSM6989RS	
C416	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		IC309	62119-102-536	IC:AN3592K	
C417	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		IC311	62119-103-698	IC:TC9015P	
C418	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		IC314	62119-103-693	IC:BA7021	
C429	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z		IC316	62119-103-702	IC:LA7210	
C430	61407-101-480	C-CERAMIC.TEMP:CC45 SL TAPG 50V 330-J		IC317	62119-103-701	IC:AN78M09R	
C431	61607-402-200	C-ELECTROLYTIC:CE04W TAPG 50V 0.47M		IC318	62119-601-183	IC:MC7805C SST	
C432	61407-101-480	C-CERAMIC.TEMP:CC45 SL TAPG 50V 330-J		L303	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C433	61607-402-421	C-ELECTROLYTIC:CE04W TAPG 25V 0.22M		L304	62427-812-151	COIL-PEAKING:EL0606RA-151J(150UH) TAPG	
C434	61607-134-014	C-ELECTROLYTIC:CE04W TAPG 50V 0.1M		L305	62427-812-220	COIL-PEAKING:EL0606RA-220J(22UH) TAPG	
C435	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		L306	62427-812-180	COIL-PEAKING:EL0606RA-180J(18UH) TAPG	
C436	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		L307	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C438	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J		L308	62427-812-151	COIL-PEAKING:EL0606RA-151J(150UH) TAPG	
C439	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		L311	62427-812-151	COIL-PEAKING:EL0606RA-151J(150UH) TAPG	
C440	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M		L313	62427-812-150	COIL-PEAKING:EL0606RA-150J(15UH) TAPG	
C441	61507-121-411	C-POLYESTER:CQ921M TAPG 100V 0.0033M-J		L314	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C442	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M		L315	62427-812-150	COIL-PEAKING:EL0606RA-150J(15UH) TAPG	
C443	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M		L316	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C444	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M		L317	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C445	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M		L318	62427-812-330	COIL-PEAKING:EL0606RA-33UH TAPG	
C446	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		L319	62427-812-820	COIL-PEAKING:EL0606RA-82UH TAPG	
C447	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		L322	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C448	61407-105-180	C-CERAMIC.TEMP:CC45 CH TAPG 50V 22-J		L323	62427-812-470	COIL-PEAKING:EL0606RA-470J(47UH) TAPG	
C449	61407-105-180	C-CERAMIC.TEMP:CC45 CH TAPG 50V 22-J		L324	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C450	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		L325	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C451	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		L326	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C452	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N		L327	62427-812-180	COIL-PEAKING:EL0606RA-180J(18UH) TAPG	
C453	61507-121-227	C-POLYESTER:CQ921M TAPG 50V 0.0022M-J		L328	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C454	61507-121-470	C-POLYESTER:CQ921M TAPG 100V 0.01M-K		L329	62427-812-820	COIL-PEAKING:EL0606RA-82UH TAPG	
C455	61507-121-227	C-POLYESTER:CQ921M TAPG 50V 0.0022M-J		L330	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C456	61507-121-520	C-POLYESTER:CQ921M TAPG 50V 0.027M-K		L332	62427-812-330	COIL-PEAKING:EL0606RA-33UH TAPG	
C457	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M		L333	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
C459	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M		L334	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	

• S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
L335	62427-812-390	COIL-PEAKING:EL0606RA-390J(39UH) TAPG	
L336	62427-812-330	COIL-PEAKING:EL0606RA-33UH TAPG	
L337	62427-812-101	COIL-PEAKING:EL0606RA-101J(100UH) TAPG	
L339	62427-812-470	COIL-PEAKING:EL0606RA-470J(47UH) TAPG	
Q301	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q302	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q304	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q305	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q306	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q307	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q308	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q311	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q312	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q313	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q314	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q315	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q316	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q317	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q319	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q320	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q321	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q322	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q323	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q324	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q325	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q326	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q327	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q328	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q329	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q330	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q331	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q332	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q333	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q334	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q335	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q336	62149-301-431	TRANSISTOR:KSC 1008-Y	
Q337	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q338	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q339	62149-301-754	TRANSISTOR:KSA 928A-Y E-C-B	
Q339	62139-701-055	TRANSISTOR:KSA 928A-Y	
Q340	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q341	62149-301-754	TRANSISTOR:KSA 928A-Y E-C-B	
Q341	62139-701-055	TRANSISTOR:KSA 928A-Y	
Q342	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q343	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q344	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q345	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q346	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q347	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q348	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q349	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q351	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q352	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q353	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q355	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q356	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q357	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q358	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q359	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q360	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q361	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q363	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q365	62159-601-003	FET:2SK 117 GR	
R301	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R302	61048-177-225	R-METAL FILM:RM 1/8TS 2.2M-J	
R303	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R304	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R305	61048-177-392	R-METAL FILM:RM 1/8TS 3.9K-J	
R306	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R307	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R308	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R309	61048-177-391	R-METAL FILM:RM 1/8TS 390-J	
R310	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
R311	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R312	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R313	61048-177-273	R-METAL FILM:RM 1/8TS 27K-J	
R314	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R315	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R316	61048-177-684	R-METAL FILM:RM 1/8TS 680K-J	
R317	61048-177-684	R-METAL FILM:RM 1/8TS 680K-J	
R318	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R319	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R320	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R321	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
R322	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R323	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R324	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
R325	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R326	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R327	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
R328	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R329	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R330	61048-177-821	R-METAL FILM:RM 1/8TS 820-J	
R331	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R332	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
R333	61048-177-123	R-METAL FILM:RM 1/8TS 12K-J	
R334	61048-177-271	R-METAL FILM:RM 1/8TS 270-J	
R335	61048-177-392	R-METAL FILM:RM 1/8TS 3.9K-J	
R336	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R337	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R338	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R339	61048-177-392	R-METAL FILM:RM 1/8TS 3.9K-J	
R340	61048-177-391	R-METAL FILM:RM 1/8TS 390-J	
R344	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R345	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R346	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
R347	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R348	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R355	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
R358	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R359	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R360	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R361	61048-177-822	R-METAL FILM:RM 1/8TS 8.2K-J	
R362	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R363	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R364	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R365	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R366	61048-177-391	R-METAL FILM:RM 1/8TS 390-J	
R367	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R370	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R371	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R372	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R373	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R374	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
R377	61048-177-470	R-METAL FILM:RM 1/8TS 47-J	
R378	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R379	61048-177-123	R-METAL FILM:RM 1/8TS 12K-J	
R380	61048-177-151	R-METAL FILM:RM 1/8TS 150-J	
R381	61048-177-821	R-METAL FILM:RM 1/8TS 820-J	
R382	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R383	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
R384	61048-177-182	R-METAL FILM:RM 1/8TS 1.8K-J	
R385	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R386	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R387	61048-177-822	R-METAL FILM:RM 1/8TS 8.2K-J	
R388	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R389	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R390	61048-177-123	R-METAL FILM:RM 1/8TS 12K-J	
R391	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R392	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R393	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R394	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	
R395	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R396	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R397	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R398	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R399	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R400	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R401	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R402	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R403	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R404	61048-177-393	R-METAL FILM:RM 1/8TS 39K-J	
R405	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R406	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R407	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R408	61048-177-132	R-METAL FILM:RM 1/8TS 1.3K-J	
R409	61048-177-560	R-METAL FILM:RM 1/8TS 56-J	
R410	61048-177-750	R-METAL FILM:RM 1/8TS 75-J	
R411	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R412	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R413	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R414	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R415	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R416	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R419	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R420	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R421	61048-177-105	R-METAL FILM:RM 1/8TS 1M-J	
R422	61048-177-105	R-METAL FILM:RM 1/8TS 1M-J	
R423	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R424	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R425	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
R426	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
R427	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R428	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R429	61048-177-822	R-METAL FILM:RM 1/8TS 8.2K-J	
R430	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R431	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
R432	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	

* S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
R433	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R434	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R435	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R436	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R450	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
R451	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
R452	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R453	61048-177-334	R-METAL FILM:RM 1/8TS 330K-J	
R454	61048-177-471	R-METAL FILM:RM 1/8TS 470-J	
R455	61048-177-183	R-METAL FILM:RM 1/8TS 18K-J	
R456	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R457	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
R458	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R460	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R461	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R462	61048-177-123	R-METAL FILM:RM 1/8TS 12K-J	
R463	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R464	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R465	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R466	61048-177-271	R-METAL FILM:RM 1/8TS 270-J	
R467	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R468	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R469	61048-177-154	R-METAL FILM:RM 1/8TS 150K-J	
R470	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
R471	61048-177-563	R-METAL FILM:RM 1/8TS 56K-J	
R472	61048-177-621	R-METAL FILM:RM 1/8TS 620-J	
R476	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R478	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R479	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R480	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
R481	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R482	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R484	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R486	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R488	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
R489	61048-177-105	R-METAL FILM:RM 1/8TS 1M-J	
R490	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R491	61048-177-391	R-METAL FILM:RM 1/8TS 390-J	
R492	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
R493	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R494	61048-177-510	R-METAL FILM:RM 1/8TS 51-J	
VR301	61246-105-223	VR-SEMI:RH0615C 22KB	
VR302	61246-105-102	VR-SEMI:RH0615C 1KB	
VR303	61246-105-102	VR-SEMI:RH0615C 1KB	
VR305	61246-105-102	VR-SEMI:RH0615C 1KB	
VR306	61246-105-102	VR-SEMI:RH0615C 1KB	
VR307	61246-105-222	VR-SEMI:RH0615C 2.2KB	
VR308	61246-105-102	VR-SEMI:RH0615C 1KB	
VR309	61246-105-102	VR-SEMI:RH0615C 1KB	
XT301	64539-012-091	CRYSTAL:KSS-6K(4.433619M)	
XT302	64539-012-093	CRYSTAL:4.406251M	
XT303	64539-012-094	CRYSTAL:17.734476M	
XT304	64539-102-319	CERAMIC RESONATOR:CSB500ES	

690SD-G08P0002 VIDEO OSD-PART :PAL HI-FI(SUA)

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
C419	61407-105-270	C-CERAMIC.TEMP:CC45 CH TAPG 50V 27-J	
C420	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C421	61607-401-630	C-ELECTROLYTIC:CE04W TAPG 35V 4.7M	
C423	61607-402-230	C-ELECTROLYTIC:CE04W TAPG 50V 3.3M	
C424	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C437	61048-177-303	R-METAL FILM:RM 1/8TS 30K-J	
C478	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C484	61407-105-860	C-CERAMIC.TEMP:CC45 CH TAPG 50V 10-D	
D504	61407-105-300	C-CERAMIC.TEMP:CC45 CH TAPG 50V 68-J	
D505	62169-406-482	DIODE:1N4148 SAMSUNG	
IC310	62169-406-482	DIODE:1N4148 SAMSUNG	
IC312	62119-103-692	IC:AN6308	
IC313	62109-104-998	IC:UPD6142C-001	
L331	62119-103-648	IC:LA 7213	
R341	62427-812-470	COIL-PEAKING:EL0606RA-470J(47UH) TAPG	
R342	61048-177-224	R-METAL FILM:RM 1/8TS 220K-J	
R368	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
R369	61048-177-911	R-METAL FILM:RM 1/8TS 910-J	
R437	61048-178-332	R-METAL FILM:RM 1/8TS 3.3K-G	
R438	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R439	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R440	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R483	61048-178-102	R-METAL FILM:RM 1/8TS 1K-G	
R546	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RS2	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	

VPS-PART :PAL HI-FI(SUA)

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
C425	61607-134-014	C-ELECTROLYTIC:CE04W TAPG 50V 0.1M	
C426	61607-134-014	C-ELECTROLYTIC:CE04W TAPG 50V 0.1M	
C427	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C428	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
D303	62169-406-482	DIODE:1N4148 SAMSUNG	

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
IC315	62119-103-700	IC:SDA5642	
Q350	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
R441	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R442	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R443	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R444	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R445	61048-177-824	R-METAL FILM:RM 1/8TS 820K-J	
R446	61048-177-105	R-METAL FILM:RM 1/8TS 1M-J	
R447	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
R448	61048-177-824	R-METAL FILM:RM 1/8TS 820K-J	
R449	61048-177-562	R-METAL FILM:RM 1/8TS 5.6K-J	

ASSY MAIN B :VI/X-790 PAL HI-FI SYS/SER/LNR

AUDIO PART:NONDUBBING BIAS OSC

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
C814	61509-339-010	C-POLYESTER:MDX 100V 473K	
C825	61507-121-471	C-POLYESTER:CQ921M TAPG 50V 0.01M-J	
C826	61507-121-481	C-POLTESTER:CQ921M TAPG 50V 0.015M-J	
C827	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M	
OSC1	62429-014-099	COIL-BIAS OSC:12BOWT SHIELD CAP	
Q803	62149-301-431	TRANSISTOR:KSC 1008-Y	
R820	61048-177-470	R-METAL FILM:RM 1/8TS 47-J	
R821	61048-177-333	R-METAL FILM:RM 1/8TS 33K-J	
R822	61048-177-150	R-METAL FILM:RM 1/8TS 15-J	

AUDIO PART:L/M PARTS

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
C801	61507-121-340	C-POLYESTER:CQ921M TAPG 100V 0.001M-K	
C802	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C803	61507-121-411	C-POLYESTER:CQ921M TAPG 100V 0.0033M-J	
C804	61507-121-260	C-POLYESTER:CQ921M TAPG 50V 0.1M-J	
C805	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C806	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C807	61507-121-471	C-POLYESTER:CQ921M TAPG 50V 0.01M-J	
C808	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C809	61607-401-450	C-ELECTROLYTIC:CE04W TAPG 16V 33M	
C811	61507-121-450	C-POLYESTER:CQ921M TAPG 50V 0.0068M-K	
C812	61507-121-431	C-POLYESTER:CQ921M TAPG 50V 0.0047M-J	
C813	61507-121-610	C-POLYESTER:CQ921M TAPG 100V 0.012M-J	
C815	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C816	61507-121-520	C-POLYESTER:CQ921M TAPG 50V 0.027M-K	
C817	61507-121-511	C-POLTESTER:CQ921M TAPG 100V 0.022M-J	
C818	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C819	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C820	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C821	61607-401-471	C-ELECTROLYTIC:CE04W TAPG 16V 100M(SG)	
C822	61407-117-228	C-CERAMIC AXIAL:TAPG SL50V 0.022M-Z	
C823	61407-101-440	C-CERAMIC.TEMP:CC45 SL TAPG 50V 220-J	
CN801	63349-062-310	CONNECTOR-WAFER:5267-02A	S.N.A
CN802	63349-062-320	CONNECTOR-WAFER:5267-03A	S.N.A
CN803	63349-062-310	CONNECTOR-WAFER:5267-02A	S.N.A
CN804	63349-062-340	CONNECTOR-WAFER:5267-05A	S.N.A
IC801	62119-103-685	IC:LA7295	
L801	62427-814-101	COIL-PEAKING AXIAL:BAL03 TAPG 101K	
L802	62429-010-280	COIL-PEAKING:BOAM-22MH	
L804	62427-814-101	COIL-PEAKING AXIAL:BAL03 TAPG 101K	
R801	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R803	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R804	61048-177-334	R-METAL FILM:RM 1/8TS 330K-J	
R805	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R806	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R807	61048-177-563	R-METAL FILM:RM 1/8TS 56K-J	
R808	61048-177-105	R-METAL FILM:RM 1/8TS 1M-J	
R809	61048-177-183	R-METAL FILM:RM 1/8TS 18K-J	
R810	61048-177-822	R-METAL FILM:RM 1/8TS 8.2K-J	
R811	61048-177-122	R-METAL FILM:RM 1/8TS 1.2K-J	
R812	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
R813	61048-177-271	R-METAL FILM:RM 1/8TS 270-J	
R814	61048-177-153	R-METAL FILM:RM 1/8TS 15K-J	
R815	61048-177-392	R-METAL FILM:RM 1/8TS 3.9K-J	
R816	61048-177-331	R-METAL FILM:RM 1/8TS 330-J	
R817	61048-177-183	R-METAL FILM:RM 1/8TS 18K-J	
R818	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R819	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
VR801	61246-105-103	VR-SEMI:RH0615C 10KB	
VR802	61246-105-224	VR-SEMI:RH0615C 220KB	

SYSCON PART :PAL G-8 HI-FI

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
C501	61417-109-200	C-CERAMIC.HK:CK45F TAPG 50V 0.047M-Z	
C502	61609-121-102	C-ELECTROLYTIC:CE04W 6.3V 1000M	
C505	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C506	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C510	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C514	61417-109-120	C-CERAMIC.HK:CK45F TAPG 50V 0.1M-J	
CN501	63349-062-360	CONNECTOR-WAFER:5267-07A	S.N.A
CN502	63349-062-420	CONNECTOR-WAFER:5267-13A	S.N.A
CN503	63349-062-390	CONNECTOR-WAFER:5267-10A	S.N.A

* S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
CN504	63349-062-340	CONNECTOR-WAFER:5267-05A	
CN505	63349-062-330	CONNECTOR-WAFER:5267-04A	
D501	62169-406-482	DIODE:1N4148 SAMSUNG	
D502	62169-406-482	DIODE:1N4148 SAMSUNG	
D506	62169-901-057	DIODE SHOTTKY:HRP 22	
Q501	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q506	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
R501	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R502	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R503	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R504	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R505	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R506	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R507	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R508	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R509	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R516	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R517	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R518	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R519	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R520	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R522	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
R523	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
R524	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R525	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R526	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R527	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R528	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R529	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R531	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R532	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R533	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R534	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R535	61048-177-101	R-METAL FILM:RM 1/8TS 100-J	
R536	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R537	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R538	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R539	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R540	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R542	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R543	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R544	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R545	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
X501	64539-102-012	CERAMIC RESONATOR:PCR 4.0MC	

SERVO PART :PAL G-8 HI-FI

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
C602	61507-121-531	C-POLYESTER:CQ921M TAPG 50V 0.033M-J	
C603	61507-121-511	C-POLTESTER:CQ921M TAPG 100V 0.022M-J	
C604	61607-803-120	C-ELECTROLYTIC.NP:CE04W TAPG 16V 10M	
C605	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C606	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C607	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C608	61607-121-100	C-ELECTROLYTIC:CE04W TAPG 6.3V 100M	
C609	61407-101-510	C-CERAMIC.TEMP:CC45 SL TAPG 50V 470-J	
C610	61607-803-210	C-ELECTROLYTIC.NP:CE04W TAPG 50V 1M	
C611	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C612	61607-803-190	C-ELECTROLYTIC.NP:CE04W TAPG 50V 0.47M	
C613	61607-121-100	C-ELECTROLYTIC:CE04W TAPG 6.3V 100M	
C614	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C615	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C616	61507-121-551	C-POLYESTER:CQ921M TAPG 50V 0.047M-J	
C617	61507-121-600	C-POLYESTER:CQ921M TAPG 100V 0.056M-K	
C618	61407-117-104	C-CERAMIC AXIAL:TAPG Y 16V 0.01-N	
C619	61509-121-228	C-POLYESTER:CQ921M 50V 0.22M-J(F-A)	
C620	61507-121-260	C-POLYESTER:CQ921M TAPG 50V 0.1M-J	
C621	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M	
C622	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M	
C625	61607-803-210	C-ELECTROLYTIC.NP:CE04W TAPG 50V 1M	
C626	61507-121-440	C-POLYESTER:CQ921M TAPG 100V 0.0056M-K	
C627	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C628	61507-121-390	C-POLYESTER:CQ921M TAPG 100V 0.0022M-K	
C629	61607-402-200	C-ELECTROLYTIC:CE04W TAPG 50V 0.47M	
C630	61507-121-471	C-POLYESTER:CQ921M TAPG 50V 0.01M-J	
C631	61507-121-260	C-POLYESTER:CQ921M TAPG 50V 0.1M-J	
C632	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M	
C633	61607-401-440	C-ELECTROLYTIC:CE04W TAPG 16V 22M	
C634	61507-121-572	C-POLYESTER:CQ921M TAPG 50V 0.068M-J	
C635	61507-121-440	C-POLYESTER:CQ921M TAPG 100V 0.0056M-K	
C636	61417-109-140	C-CERAMIC.HK:CK45F TAPG 50V 0.01M-Z	
C637	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C638	61507-121-260	C-POLYESTER:CQ921M TAPG 50V 0.1M-J	
C639	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
C640	61507-121-260	C-POLYESTER:CQ921M TAPG 50V 0.1M-J	
C641	61417-109-140	C-CERAMIC.HK:CK45F TAPG 50V 0.01M-Z	
C642	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C643	61507-121-340	C-POLYESTER:CQ921M TAPG 100V 0.001M-K	
C644	61607-401-460	C-ELECTROLYTIC(SG):CE04W TAPG 16V 47M	
C645	61507-121-610	C-POLYESTER:CQ921M TAPG 100V 0.012M-J	
C646	61507-121-260	C-POLYESTER:CQ921M TAPG 50V 0.1M-J	
C647	61507-121-260	C-POLYESTER:CQ921M TAPG 50V 0.1M-J	
C648	61607-803-210	C-ELECTROLYTIC.NP:CE04W TAPG 50V 1M	
C649	61507-121-511	C-POLTESTER:CQ921M TAPG 100V 0.022M-J	
C650	61507-121-340	C-POLYESTER:CQ921M TAPG 100V 0.001M-K	
C652	61607-121-100	C-ELECTROLYTIC:CE04W TAPG 6.3V 100M	
C653	61417-109-140	C-CERAMIC.HK:CK45F TAPG 50V 0.01M-Z	
C654	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C655	61507-121-481	C-POLTESTER:CQ921M TAPG 50V 0.015M-J	
C656	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
C668	61607-402-200	C-ELECTROLYTIC:CE04W TAPG 50V 0.47M	
C670	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C671	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C672	61417-109-040	C-CERAMIC.HK:CK45F TAPG 50V 0.001M-Z	
C674	61607-402-210	C-ELECTROLYTIC:CE04W TAPG 50V 1M	
CN601	63349-062-380	CONNECTOR-WAFER:5267-09A	S.N.A
CN602	63349-062-310	CONNECTOR-WAFER:5267-02A	S.N.A
CN603	63349-062-390	CONNECTOR-WAFER:5267-10A	S.N.A
CN604	63349-062-330	CONNECTOR-WAFER:5267-04A	S.N.A
D603	62169-406-482	DIODE:1N4148 SAMSUNG	
D604	62169-406-482	DIODE:1N4148 SAMSUNG	
D607	62169-406-482	DIODE:1N4148 SAMSUNG	
D608	62169-406-482	DIODE:1N4148 SAMSUNG	
D609	62169-406-482	DIODE:1N4148 SAMSUNG	
D612	62169-406-482	DIODE:1N4148 SAMSUNG	
D613	62169-406-482	DIODE:1N4148 SAMSUNG	
D614	62169-406-482	DIODE:1N4148 SAMSUNG	
D615	62169-406-482	DIODE:1N4148 SAMSUNG	
D616	62169-406-482	DIODE:1N4148 SAMSUNG	
D617	62169-406-482	DIODE:1N4148 SAMSUNG	
D619	62169-406-482	DIODE:1N4148 SAMSUNG	
IC601	62119-103-130	IC:UPD6163ACA-802	
IC602	62109-105-012	IC:UPD6161CA-607	
IC603	62119-501-572	IC-LINEAR:LM358S(N.M)	
IC604	62119-401-427	IC:BU4070B	
Q602	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q603	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q605	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q607	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q608	62137-103-380	TRANSISTOR:KSA 733-Y TAPG	
Q609	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q610	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q611	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q612	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q613	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q614	62137-701-022	TRANSISTOR:KSR 2003 TAPG	
Q615	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q616	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q617	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
Q618	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q620	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q622	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q623	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
Q624	62137-302-740	TRANSISTOR:KSC 945-Y TAPG	
R556	61048-177-124	R-METAL FILM:RM 1/8TS 120K-J	
R601	61048-177-221	R-METAL FILM:RM 1/8TS 220-J	
R603	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R607	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R608	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R609	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R611	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R612	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R613	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R614	61048-177-683	R-METAL FILM:RM 1/8TS 68K-J	
R615	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R616	61048-177-152	R-METAL FILM:RM 1/8TS 1.5K-J	
R617	61048-177-224	R-METAL FILM:RM 1/8TS 220K-J	
R618	61048-177-181	R-METAL FILM:RM 1/8TS 180-J	
R620	61048-177-322	R-METAL FILM:RM 1/8TS 2.2K-J	
R621	61048-177-821	R-METAL FILM:RM 1/8TS 820-J	
R622	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R623	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R624	61048-177-105	R-METAL FILM:RM 1/8TS 1M-J	
R625	61048-177-563	R-METAL FILM:RM 1/8TS 56K-J	
R626	61048-177-154	R-METAL FILM:RM 1/8TS 150K-J	
R627	61048-177-563	R-METAL FILM:RM 1/8TS 56K-J	
R628	61048-177-563	R-METAL FILM:RM 1/8TS 56K-J	
R629	61048-177-333	R-METAL FILM:RM 1/8TS 33K-J	
R630	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R631	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R632	61048-177-474	R-METAL FILM:RM 1/8TS 470K-J	
R633	61048-177-154	R-METAL FILM:RM 1/8TS 150K-J	
R634	61048-177-272	R-METAL FILM:RM 1/8TS 2.7K-J	
R635	61048-177-823	R-METAL FILM:RM 1/8TS 82K-J	
R636	61048-177-823	R-METAL FILM:RM 1/8TS 82K-J	
R637	61048-177-124	R-METAL FILM:RM 1/8TS 120K-J	
R638	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R639	61048-177 332	R-METAL FILM:RM 1/8TS 3.3K-J	
R640	61048-177-154	R-METAL FILM:RM 1/8TS 150K-J	

* S.N.A : SERVICE NOT AVAILABLE.

LOCA.NO	PART-NUMBER	DESCRIPTION:SPECIFICATION	REMARK
R641	61048-177-224	R-METAL FILM:RM 1/8TS 220K-J	
R642	61048-177-822	R-METAL FILM:RM 1/8TS 8.2K-J	
R643	61048-177-333	R-METAL FILM:RM 1/8TS 33K-J	
R644	61048-177-222	R-METAL FILM:RM 1/8TS 2.2K-J	
R645	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R646	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R647	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R648	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R649	61048-177-224	R-METAL FILM:RM 1/8TS 220K-J	
R650	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R651	61048-177-682	R-METAL FILM:RM 1/8TS 6.8K-J	
R652	61048-177-154	R-METAL FILM:RM 1/8TS 150K-J	
R653	61048-177-684	R-METAL FILM:RM 1/8TS 680K-J	
R654	61048-177-333	R-METAL FILM:RM 1/8TS 33K-J	
R655	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R657	61048-177-563	R-METAL FILM:RM 1/8TS 56K-J	
R658	61048-177-563	R-METAL FILM:RM 1/8TS 56K-J	
R659	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R660	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R661	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R662	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R663	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R664	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R665	61048-177-224	R-METAL FILM:RM 1/8TS 220K-J	
R666	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R667	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R668	61048-177-224	R-METAL FILM:RM 1/8TS 220K-J	
R669	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R670	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R671	61048-177-102	R-METAL FILM:RM 1/8TS 1K-J	
R672	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R673	61048-177-105	R-METAL FILM:RM 1/8TS 1M-J	
R674	61048-177-681	R-METAL FILM:RM 1/8TS 680-J	
R675	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
R677	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R678	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
R679	61048-177-223	R-METAL FILM:RM 1/8TS 22K-J	
R680	61048-177-104	R-METAL FILM:RM 1/8TS 100K-J	
R681	61048-177-473	R-METAL FILM:RM 1/8TS 47K-J	
R682	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
R685	61048-177-333	R-METAL FILM:RM 1/8TS 33K-J	
R686	61048-177-332	R-METAL FILM:RM 1/8TS 3.3K-J	
VR601	61246-105-224	VR-SEMI:RH0615C 220KB	
VR602	61048-177-333	R-METAL FILM:RM 1/8TS 33K-J	
VR603	61246-105-104	VR-SEMI:RH0615C 100KB	
VR604	61246-106-105	VR-SEMI:RH0614C 100KB	
VR605	61246-105-474	VR-SEMI:RH0615C 470KB	
VR606	61246-106-105	VR-SEMI:RH0614C 100KB	
VR607	61246-105-474	VR-SEMI:RH0615C 470KB	
VR608	61048-177-273	R-METAL FILM:RM 1/8TS 27K-J	
	69800-603-005	ASSY TUNER:I MONO G8W PAL(VI-790) HI-FI SEM	
	64519-907-013	IF PACK:PPA 2220BL	
	62569-002-222	RF CONVERTER:MDLK3B393A	
	64519-903-070	TUNER:TECU-5883 PA09A	
CA1	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CA10	61607-401-460	C-ELECTROLYTIC:CE04W TAPG 16V 47M(SG)	
CA11	61607-131-472	C-ELECTROLYTIC:CE04W TAPG 50V 4.7M	
CA2	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CA3	61607-401-430	C-ELECTROLYTIC:CE04W TAPG 25V 10M	
CA4	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CA5	61607-401-460	C-ELECTROLYTIC:CE04W TAPG 16V 47M(SG)	
CA6	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CA7	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CA8	61607-402-230	C-ELECTROLYTIC:CE04W TAPG 50V 3.3M	
CA9	61419-109-220	C-CERAMIC HK:CK45F 50V 0.022M-Z	
CNA1	63349-601-323	CONNECTOR-WAFER:5233-06A	S.N.A
CNA2	63349-601-322	CONNECTOR-WAFER:5233-05A	S.N.A
CNA3	63349-062-320	CONNECTOR-WAFER:5267-03A	S.N.A
CNA4	63349-062-340	CONNECTOR-WAFER:5267-05A	S.N.A
ICA1	62109-201-281	IC:MC7809	
ICA2	62119-501-560	IC-LINEAR:KA33V	
LA1	62427-812-100	COIL-PEAKING:EL0606RA 10MH-J	
LA2	62427-812-100	COIL-PEAKING:EL0606RA 10MH-J	
LA3	62427-812-100	COIL-PEAKING:EL0606RA 10MH-J	
LA4	62427-812-100	COIL-PEAKING:EL0606RA 10MH-J	
QA1	62149-401-265	TRANSISTOR:2SD 1468-Q	
QA2	62137-701-012	TRANSISTOR:KSR 1003 TAPG	
RA1	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA2	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA3	61048-177-103	R-METAL FILM:RM 1/8TS 10K-J	
RA4	61048-177-362	R-METAL FILM:RM 1/8TS 3.6K-J	
RA5	61048-177-472	R-METAL FILM:RM 1/8TS 4.7K-J	
RA6	61048-177-393	R-METAL FILM:RM 1/8TS 39K-J	
RA7	61048-177-154	R-METAL FILM:RM 1/8TS 150K-J	

* S.N.A :SERVICE NOT AVAILABLE.

7. MECHNICAL EXPLODED VIEWS

Page

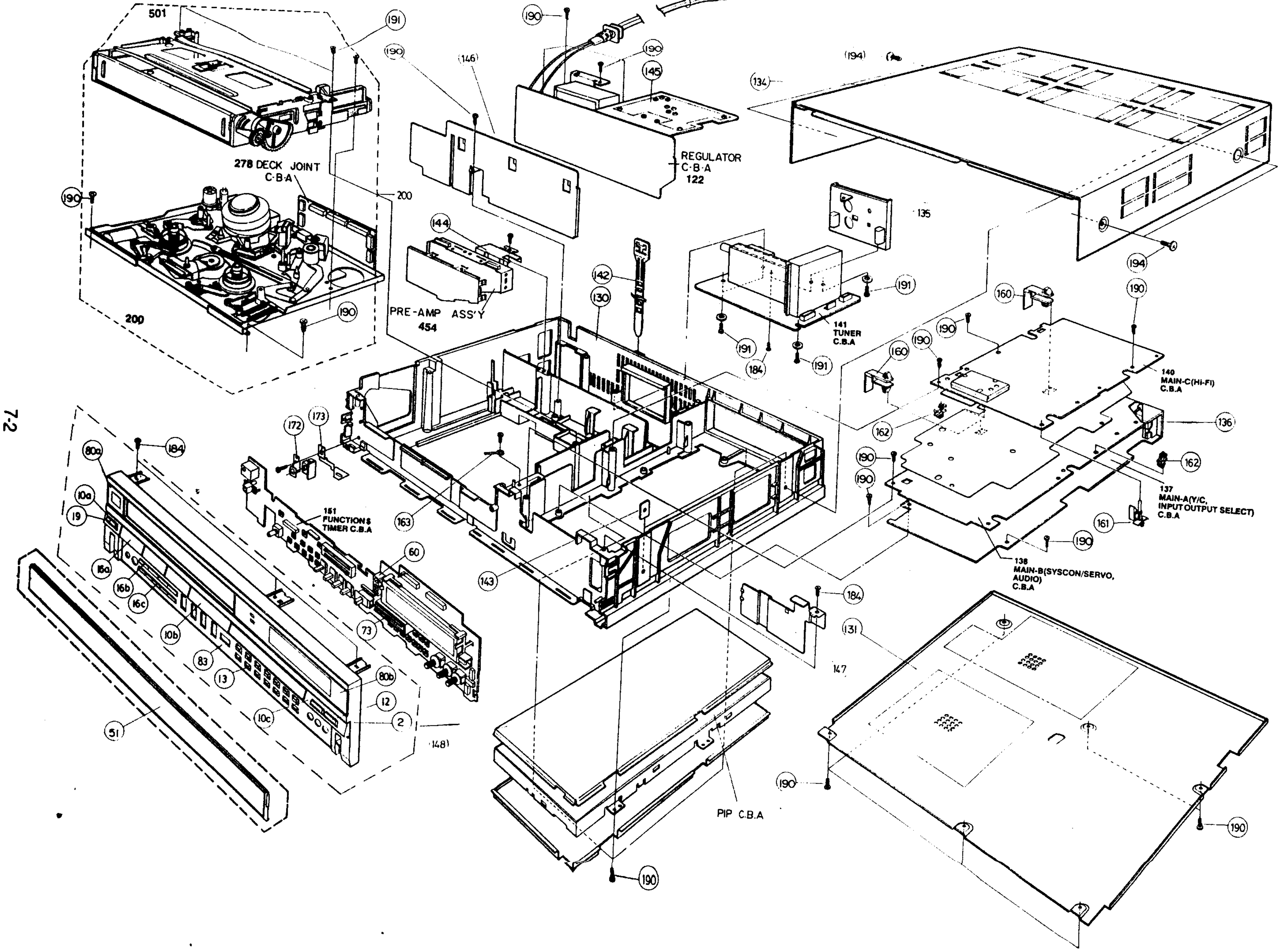
7-1. Instrument Assembly -- ------------ 7 - 2

7-2. Transport Mechanism Assembly ------- 7 - 3

7-3. Bottom Side Mechanism Assembly----- 7 - 4

7-4. Housing Assembly ---------------- 7 - 5

7-1. Instrument Assembly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REGULATOR C·B·A 122
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PRE-AMP ASS'Y 454
142
130
191
141 TUNER C.B.A
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200
191
184
191
160
190
190
140 MAIN-C(HI-FI) C.B.A
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190
162
136
190
162
172
173
80a
184
10a
19
151 FUNCTIONS TIMER C.B.A
163
190
137 MAIN-A(Y/C, INPUT OUTPUT SELECT) C.B.A
161
190
138 MAIN-B(SYSCON/SERVO, AUDIO) C.B.A
60
16a
16b
16c
143
184
10b
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PIP C.B.A
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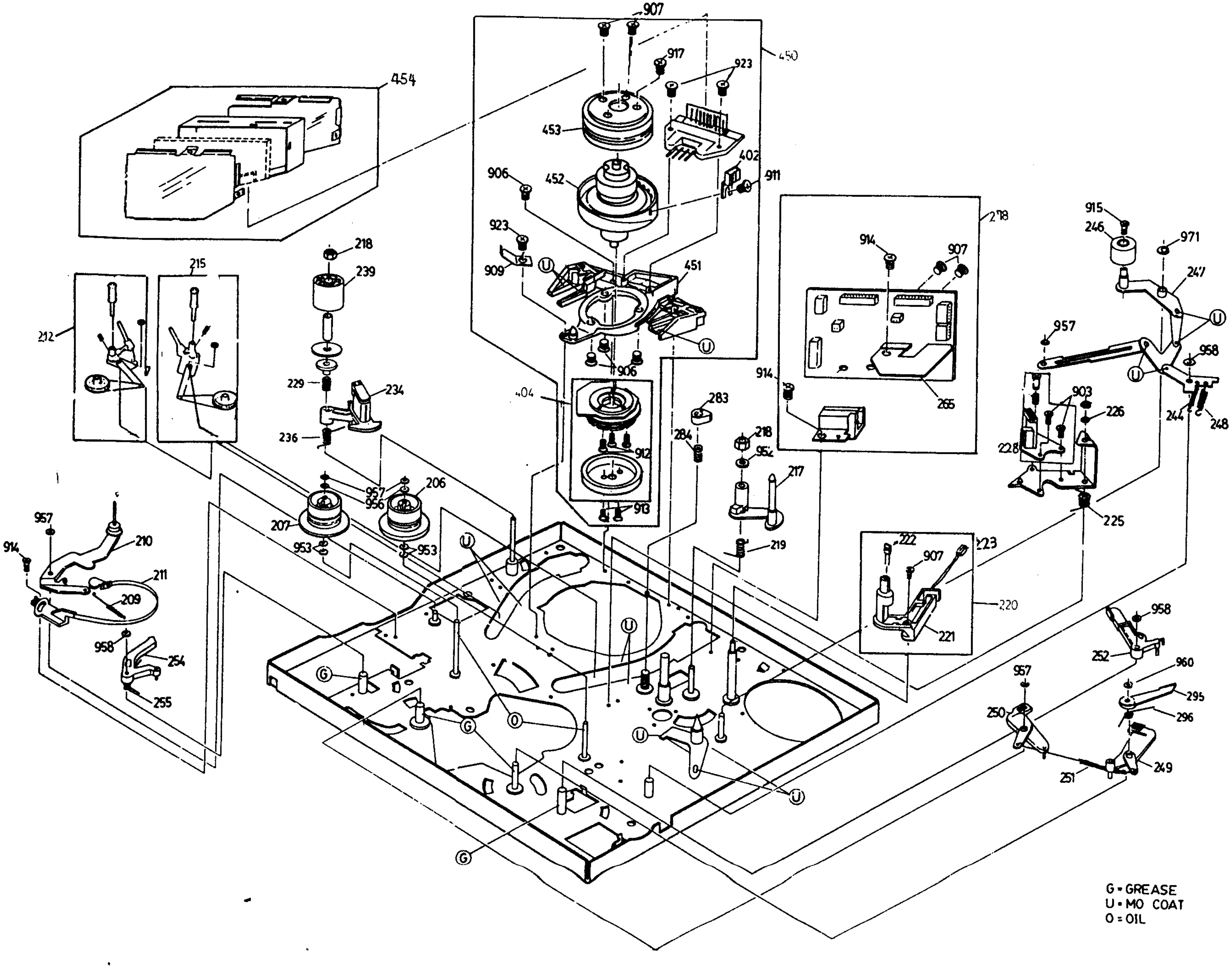
190

7-2. Transport Mechanism Assembly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U
O
G = GREASE
U = MO COAT
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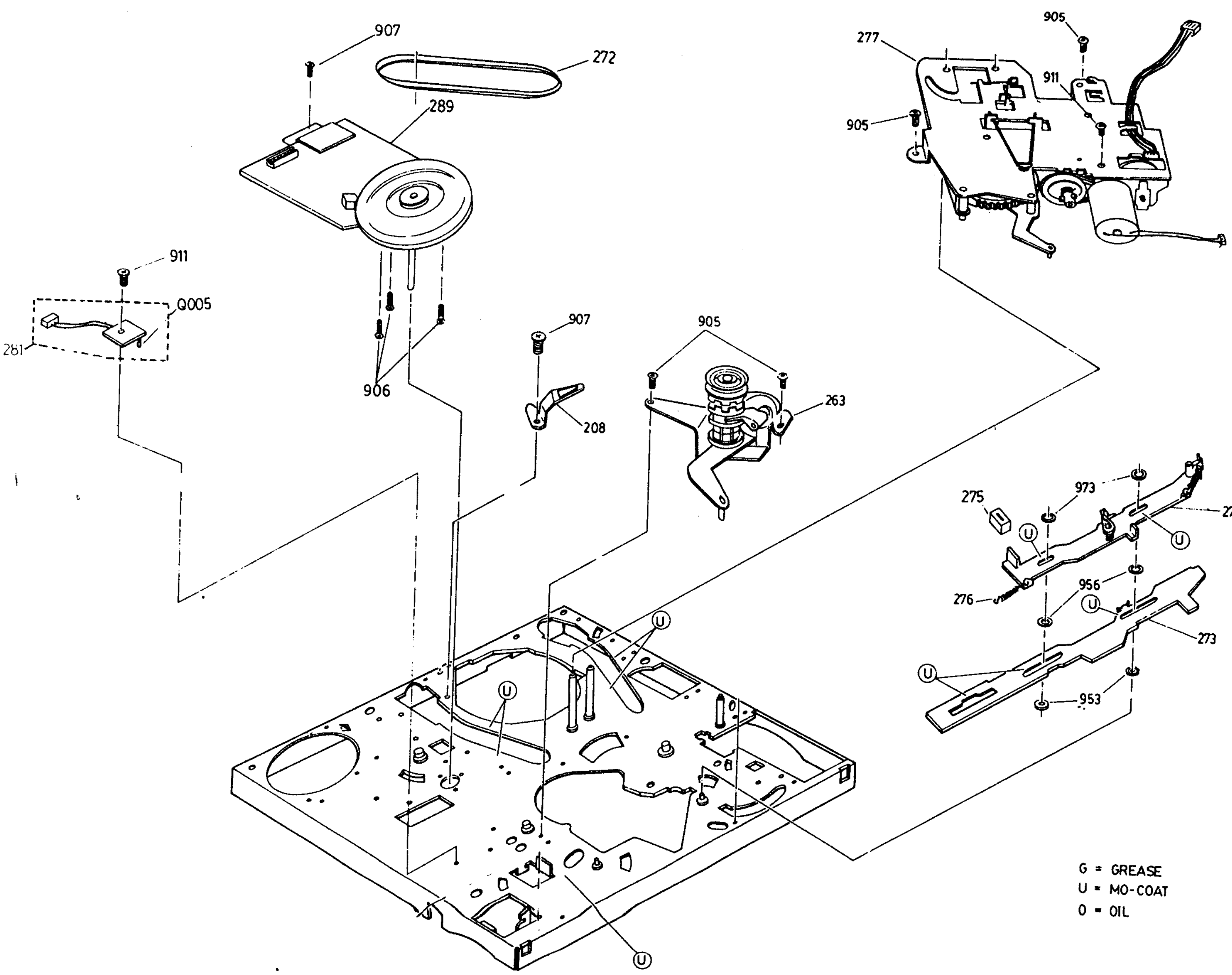
7-3. Bottom Side Mechanism Assembly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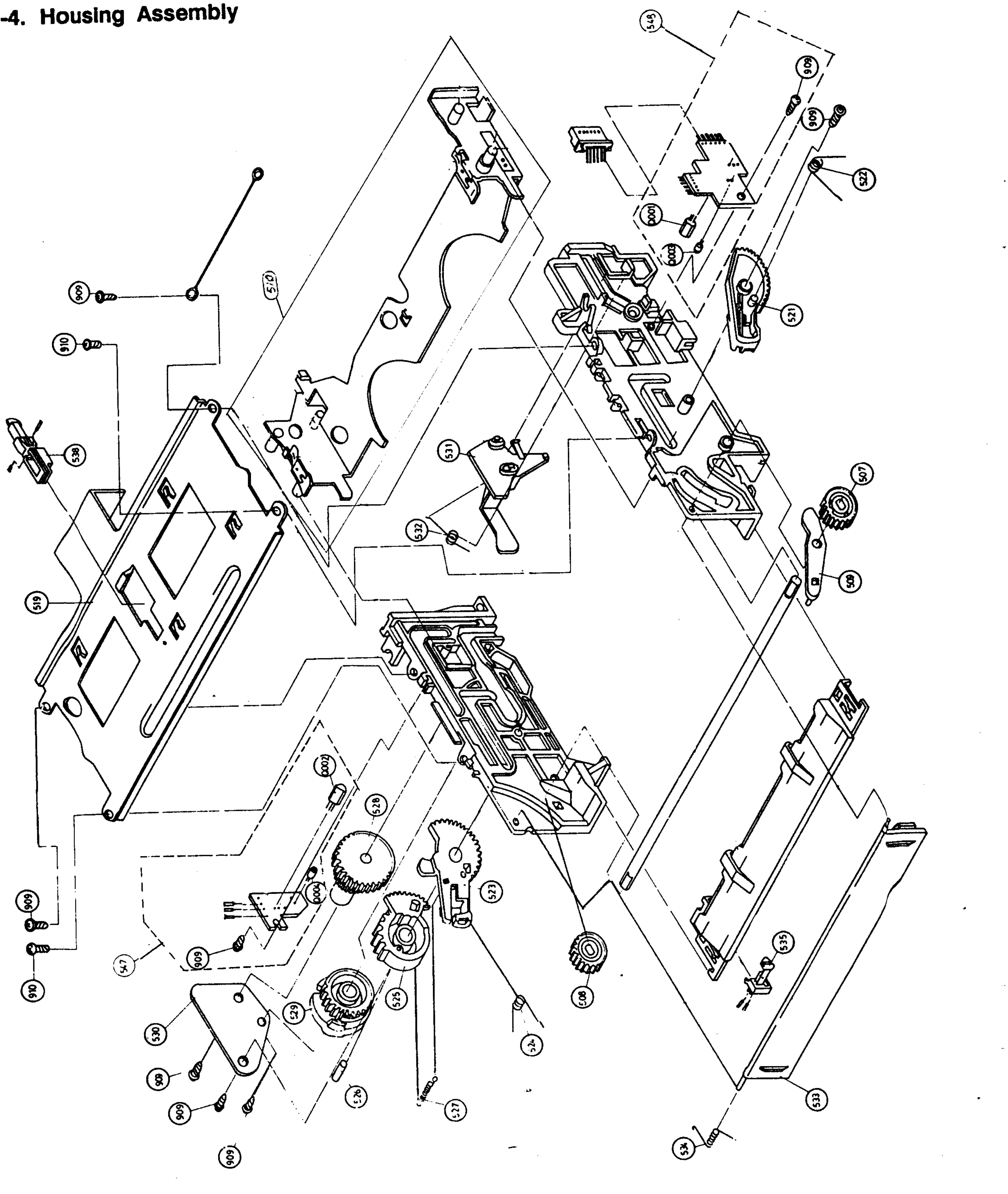
905
911
905
275
973
274
956
276
273
953
U

G = GREASE
U = MO-COAT
O = OIL

7-4. Housing Assembly


548
909
909
522
D001
D003
521
909
910
510
538
531
507
532
519
509
D002
528
D004
523
909
909
910
547
909
525
508
535
530
529
524
909
526
527
909
533
534

8. BLOCK DIAGRAMS

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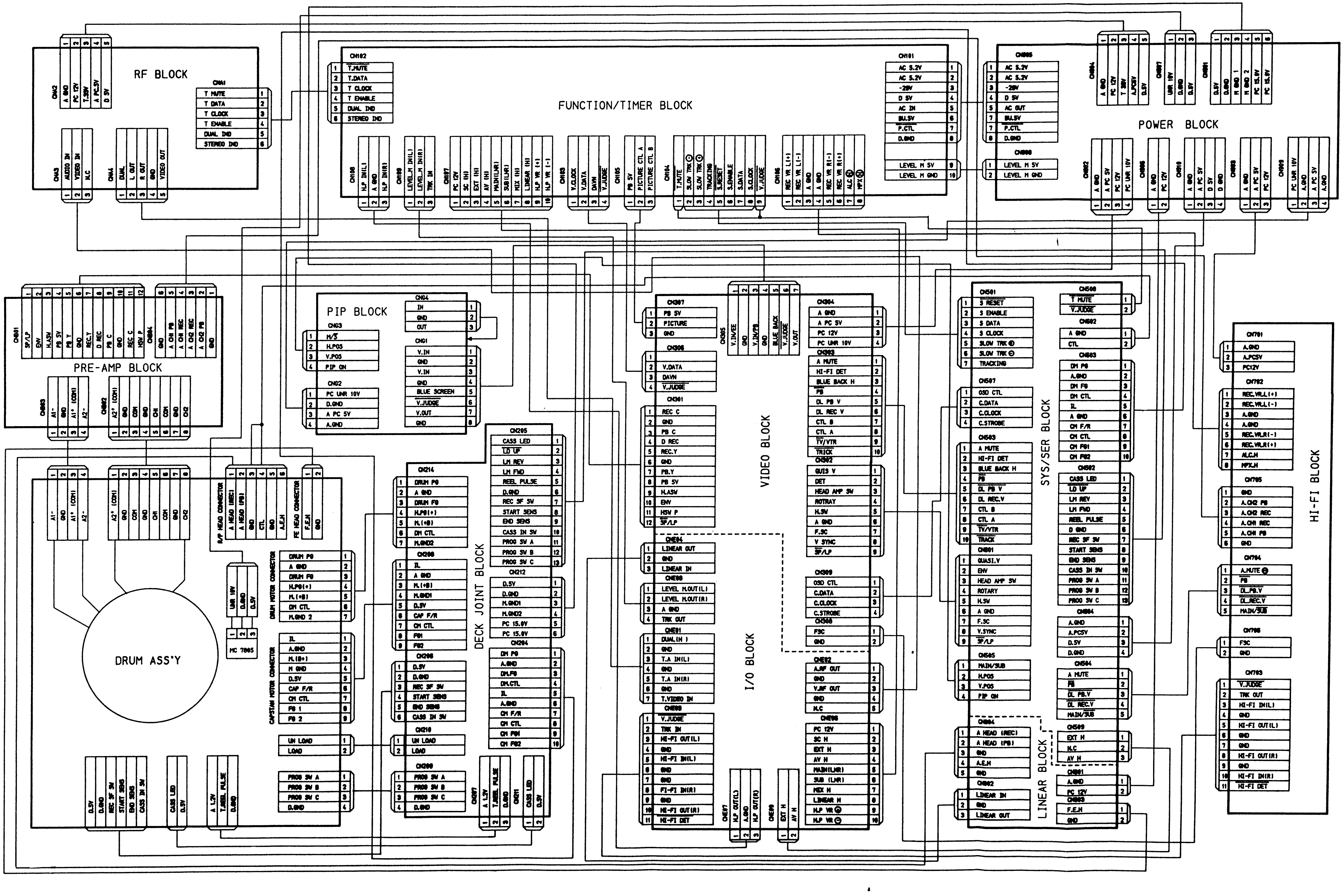
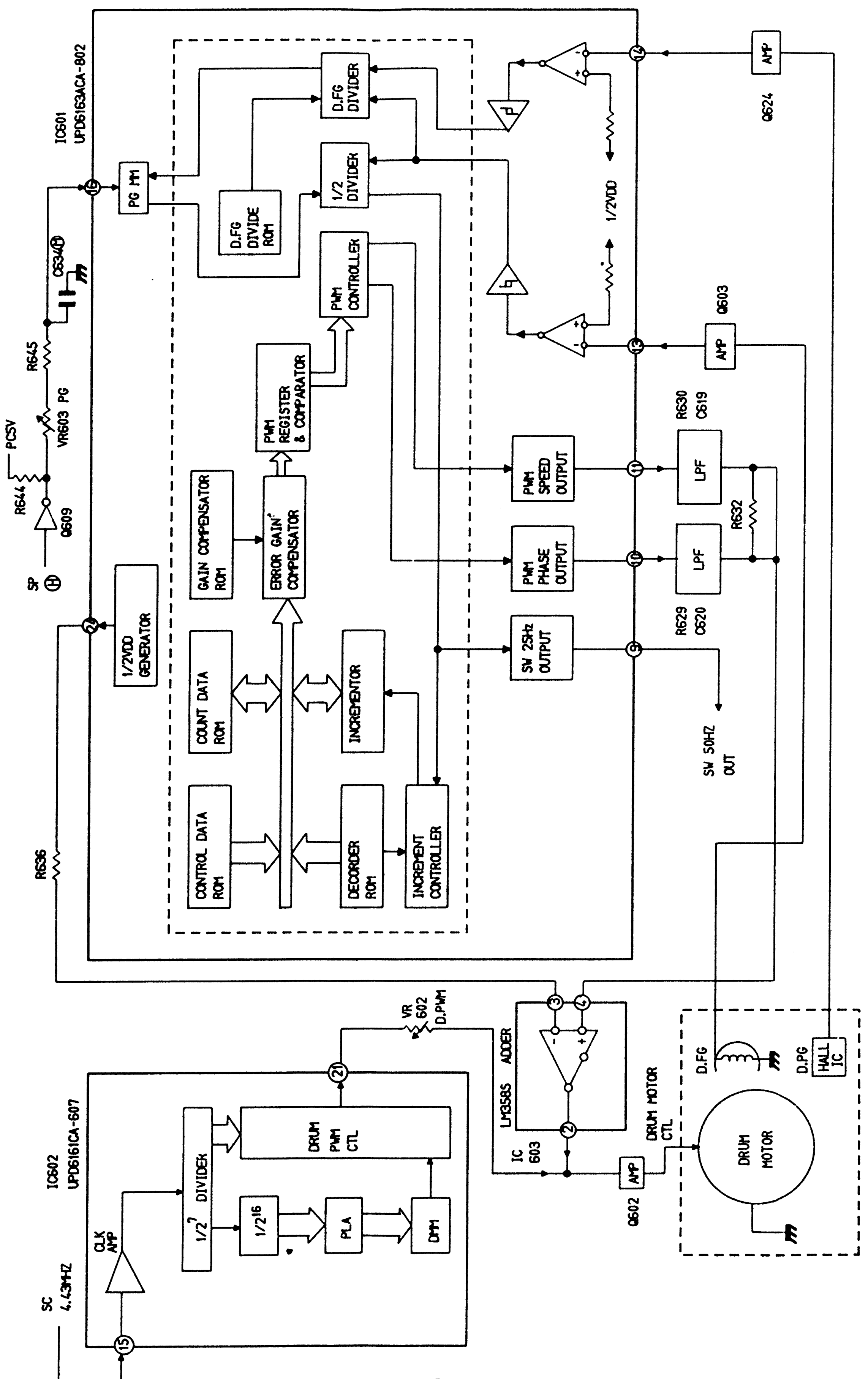
8-1. Total Wiring Diagram

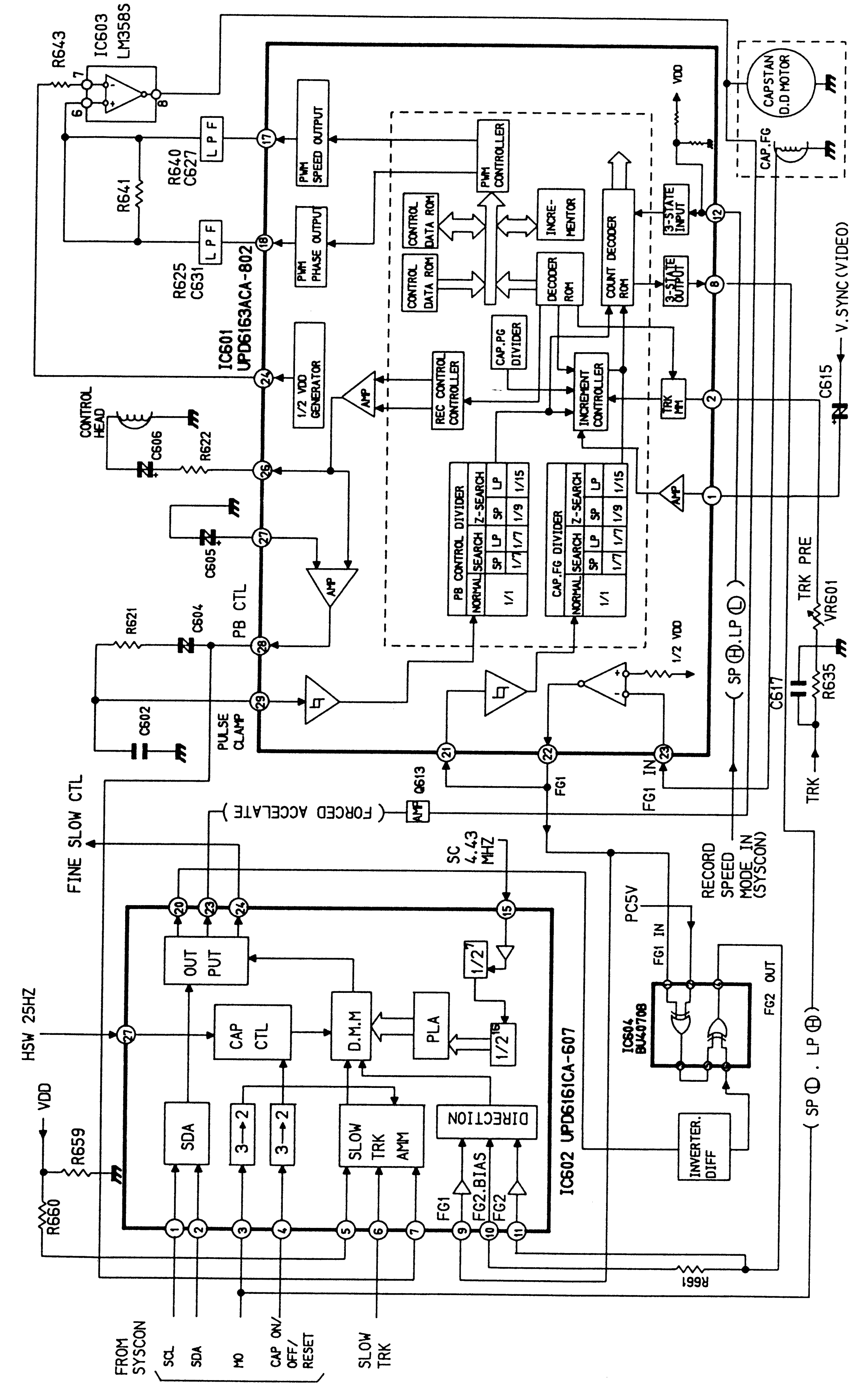

RF BLOCK
FUNCTION/TIMER BLOCK
POWER BLOCK
PRE-AMP BLOCK
PIP BLOCK
VIDEO BLOCK
SYS/SER BLOCK
HI-FI BLOCK
DECK JOINT BLOCK
I/O BLOCK
LINEAR BLOCK
DRUM ASS'Y
HC 7805
R/P HEAD CONNECTOR
FE HEAD CONNECTOR
DRUM MOTOR CONNECTOR
CAPSTAN MOTOR CONNECTOR
CNA1
CNA2
CNA3
CNA4
CN102
CN101
CN106
CN108
CN107
CN103
CN105
CN104
CN109
CN906
CN904
CN907
CN901
CN908
CN902
CN905
CN910
CN903
CN909
CN801
CN804
CN803
CN802
CNG1
CNG2
CNG3
CNG4
CN214
CN208
CN206
CN210
CN209
CN205
CN212
CN204
CN207
CN211
CN307
CN306
CN301
CN304
CN303
CN302
CN309
CN308
CN305
CNE04
CNE05
CNE01
CNE02
CNE03
CNE06
CNE07
CNE09
CN501
CN507
CN503
CN502
CN504
CN505
CN506
CN508
CN509
CN601
CN602
CN603
CN604
CN701
CN702
CN703
CN704
CN705
CN706

8-2. Servo Block

8-2-1 Drum Speed & Phase Control

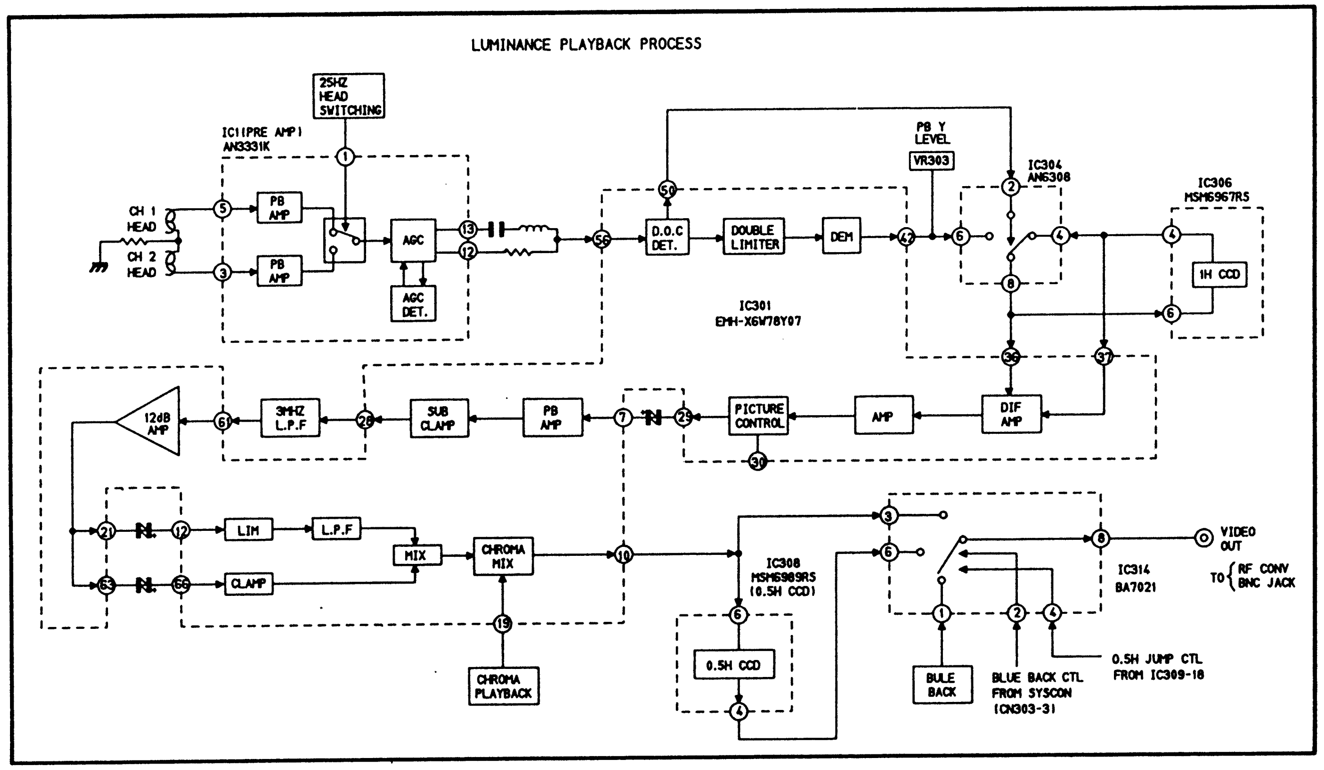

IC601
UPD6163ACA-802
PG MM
D.FG DIVIDER
1/2 DIVIDER
D.FG DIVIDE ROM
PWM CONTROLLER
PWM REGISTER & COMPARATOR
GAIN COMPENSATOR ROM
ERROR GAIN COMPENSATOR
COUNT DATA ROM
INCREMENTOR
CONTROL DATA ROM
DECORDER ROM
INCREMENT CONTROLLER
1/2VDD GENERATOR
PWM SPEED OUTPUT
PWM PHASE OUTPUT
SW 25Hz OUTPUT
LPF
SW 50HZ OUT
1/2VDD
AMP
Q624
Q603
R630
C619
R629
C620
R632
R645
C634
PCSV
R644
Q609
VR603 PG
SP H
R636
VR 602 D.PWM
ADDER
LM3585
IC 603
AMP
Q602
DRUM MOTOR CTL
D.FG
D.PG
HALL IC
DRUM MOTOR
IC602
UPD6161CA-607
CLK AMP
SC 4.43MHZ
1/2⁷ DIVIDER
1/2¹⁶
PLA
DMM
DRUM PWM CTL

8-2-2 Capstan Speed & Phase Control

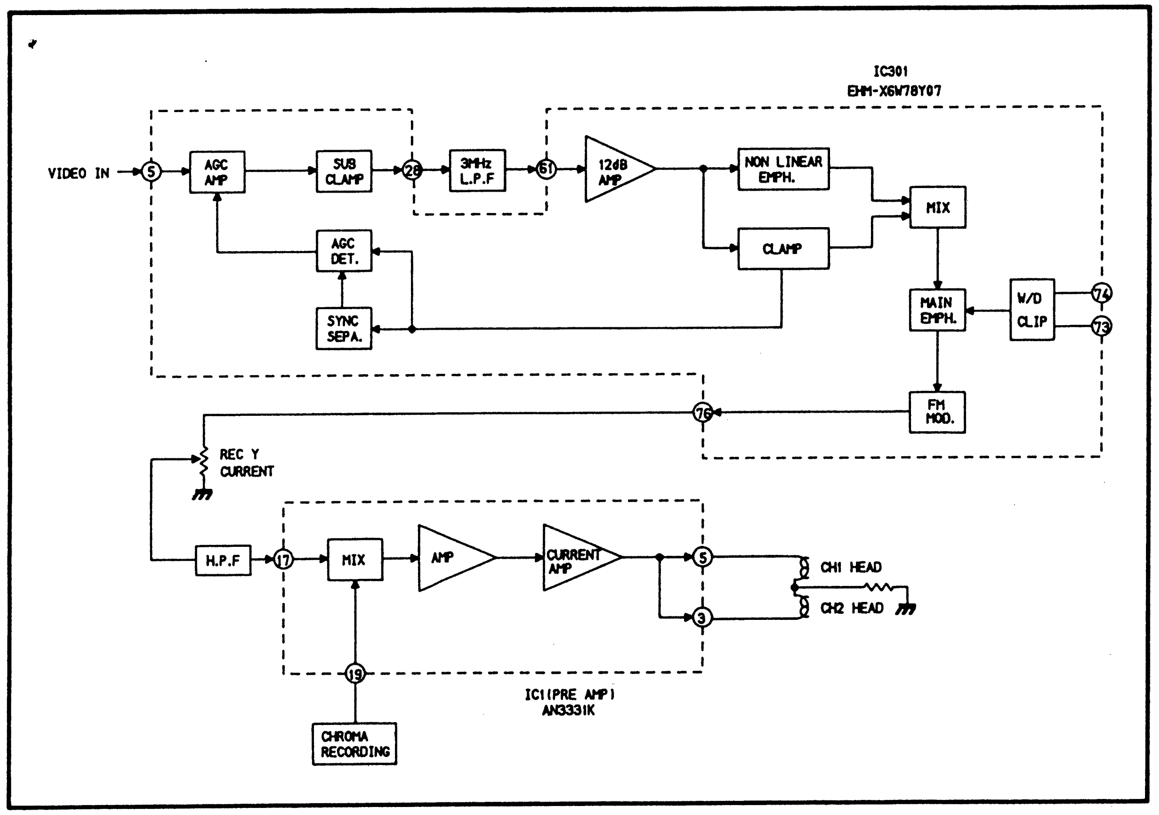

R643
IC603
LM358S
R641
R640
C627
R625
C631
L P F
IC601
UPD6163ACA-802
PWM SPEED OUTPUT
PWM PHASE OUTPUT
PWM CONTROLLER
CONTROL DATA ROM
INCRE-MENTOR
COUNT DECODER ROM
DECODER ROM
3-STATE INPUT
3-STATE OUTPUT
CAP.PG DIVIDER
REC CONTROL CONTROLLER
INCREMENT CONTROLLER
TRK MM
1/2 VDD GENERATOR
AMP
PB CONTROL DIVIDER
CAP.FG DIVIDER
NORMAL
SEARCH
Z-SEARCH
SP
LP
1/1
1/7
1/9
1/15
CAPSTAN D.D MOTOR
CAP.FG
VDD
V.SYNC (VIDEO)
C615
CONTROL HEAD
C606
R622
C605
R621
C604
PB CTL
C602
PULSE CLAMP
Q613
FG1
FG1 IN
1/2 VDD
TRK PRE
VR601
R635
C617
TRK
(SP H . LP L)
FINE SLOW CTL
(FORCED ACCELATE)
SC 4.43 MHZ
RECORD SPEED MODE IN (SYSCON)
PC5V
FG1 IN
FG2 OUT
IC604
BU4070B
INVERTER. DIFF
(SP L . LP H)
HSW 25HZ
VDD
R659
R660
OUT PUT
CAP CTL
D.M.M
PLA
1/2⁷
1/2¹⁶
SDA
3→2
SLOW TRK AMM
DIRECTION
FG1
FG2.BIAS
FG2
IC602 UPD6161CA-607
R661
FROM SYSCON
SCL
SDA
MO
CAP ON/OFF/RESET
SLOW TRK

8-3. Video Block

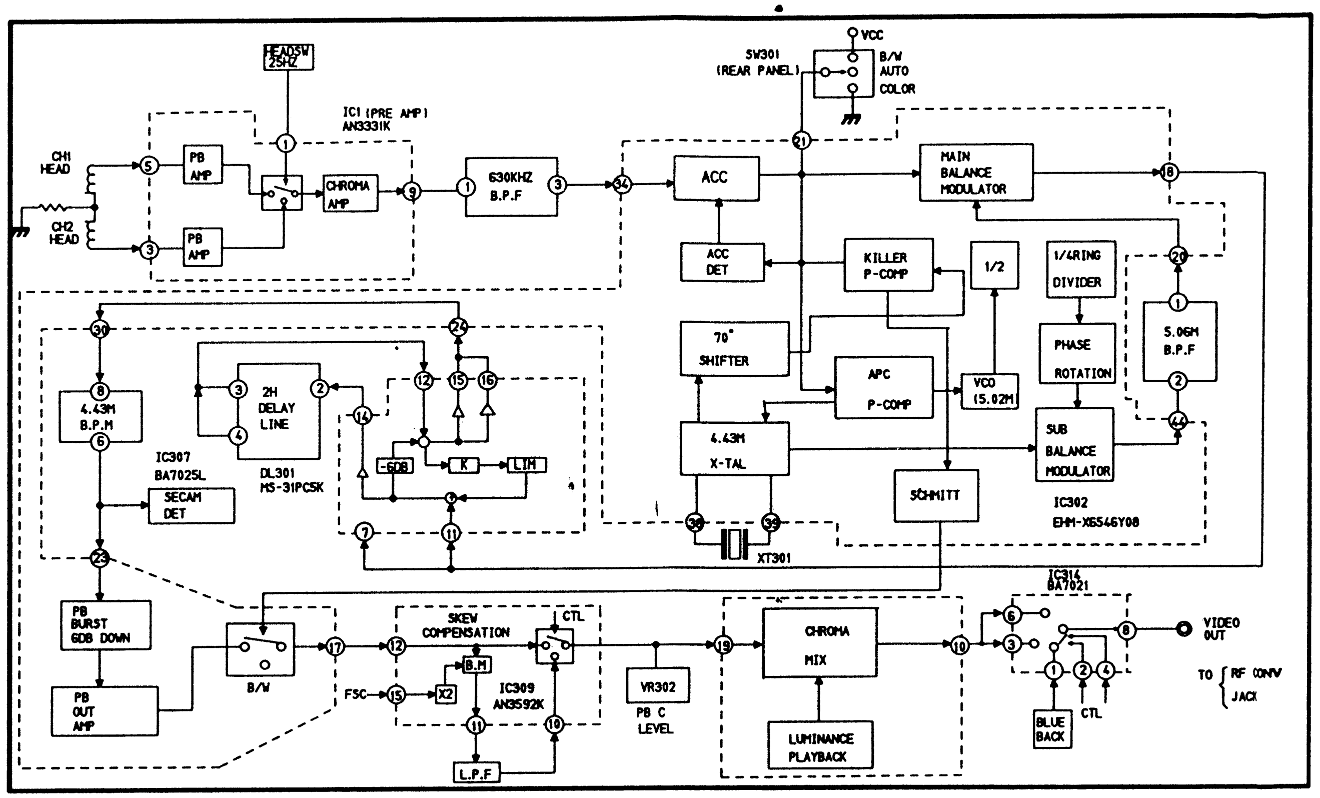
8-3-1 Luminance Playback Process


LUMINANCE PLAYBACK PROCESS
25HZ HEAD SWITCHING
IC1(PRE AMP) AN3331K
CH 1 HEAD
CH 2 HEAD
PB AMP
PB AMP
AGC
AGC DET.
D.O.C DET.
DOUBLE LIMITER
DEM
PB Y LEVEL
VR303
IC304 AN6308
IC306 MSM6967RS
1H CCD
IC301 EMH-X6W78Y07
12dB AMP
3MHZ L.P.F
SUB CLAMP
PB AMP
PICTURE CONTROL
AMP
DIF AMP
LIM
L.P.F
MIX
CLAMP
CHROMA MIX
CHROMA PLAYBACK
IC308 MSM6989RS (0.5H CCD)
0.5H CCD
IC314 BA7021
VIDEO OUT
TO RF CONV BNC JACK
BULE BACK
BLUE BACK CTL FROM SYSCON (CN303-3)
0.5H JUMP CTL FROM IC309-18

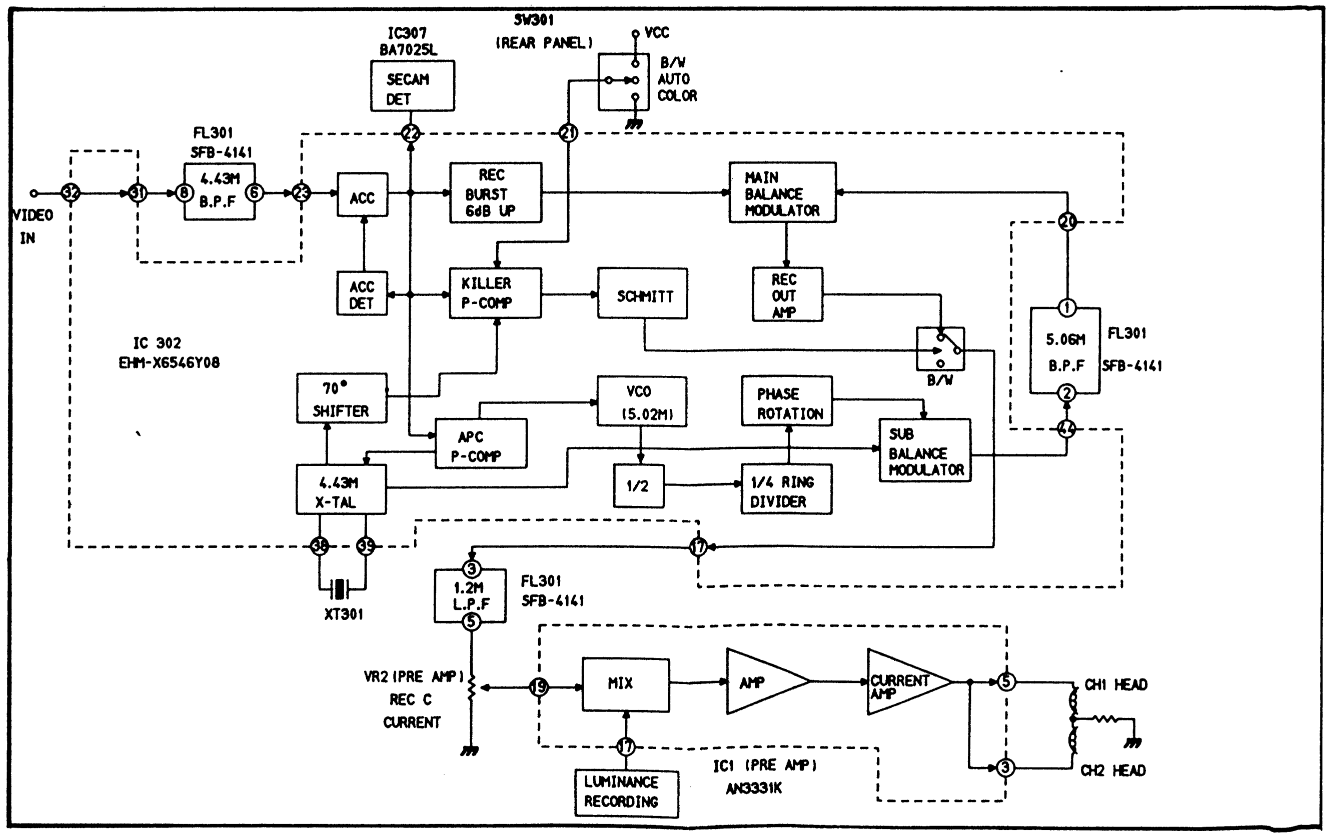
8-3-2. Luminance Record Process


IC301 EHM-X6W78Y07
VIDEO IN
AGC AMP
SUB CLAMP
3MHz L.P.F
12dB AMP
NON LINEAR EMPH.
MIX
CLAMP
AGC DET.
SYNC SEPA.
MAIN EMPH.
W/D CLIP
FM MOD.
REC Y CURRENT
H.P.F
MIX
AMP
CURRENT AMP
CH1 HEAD
CH2 HEAD
IC1(PRE AMP) AN3331K
CHROMA RECORDING

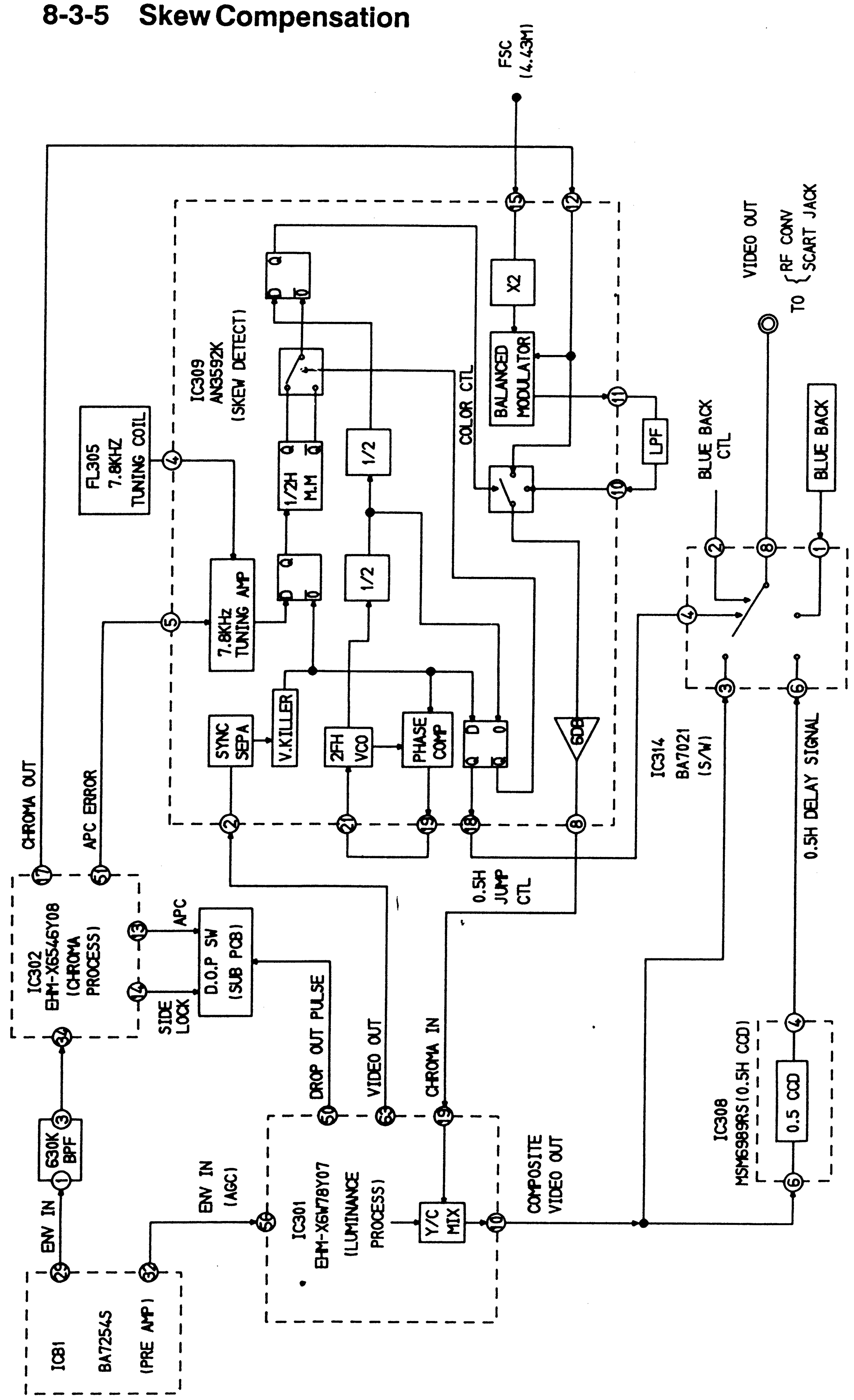
8-3-3 Chrominance Playback Process


HEADSW 25HZ
IC1 (PRE AMP) AN3331K
SW301 (REAR PANEL)
VCC
B/W
AUTO
COLOR
CH1 HEAD
CH2 HEAD
PB AMP
PB AMP
CHROMA AMP
630KHZ B.P.F
ACC
ACC DET
MAIN BALANCE MODULATOR
KILLER P-COMP
1/2
1/4RING DIVIDER
5.06M B.P.F
70° SHIFTER
APC P-COMP
VCO (5.02M)
PHASE ROTATION
4.43M X-TAL
SUB BALANCE MODULATOR
SCHMITT
IC302 EHM-X6546Y08
XT301
4.43M B.P.M
2H DELAY LINE
IC307 BA7025L
DL301 MS-31PC5K
SECAM DET
-6DB
K
LIM
PB BURST 6DB DOWN
PB OUT AMP
B/W
SKEW COMPENSATION
CTL
FSC
B.M
X2
IC309 AN3592K
L.P.F
VR302
PB C LEVEL
CHROMA MIX
LUMINANCE PLAYBACK
IC314 BA7021
VIDEO OUT
TO RF CONV JACK
BLUE BACK
CTL

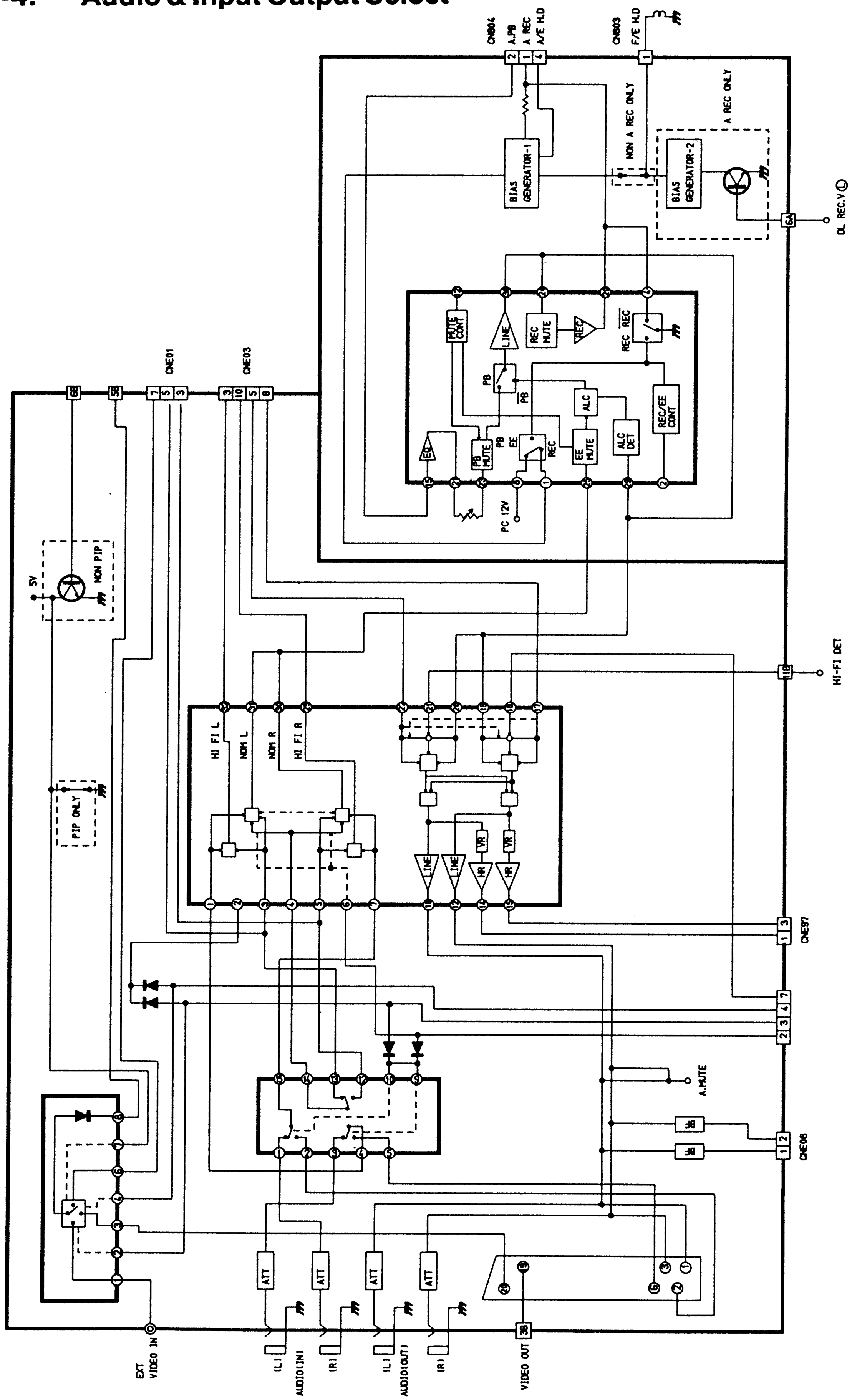
8-3-4 Chrominance Record Process


IC307 BA7025L
SECAM DET
SW301 (REAR PANEL)
VCC
B/W
AUTO
COLOR
FL301 SFB-4141
VIDEO IN
4.43M B.P.F
ACC
REC BURST 6dB UP
MAIN BALANCE MODULATOR
ACC DET
KILLER P-COMP
SCHMITT
REC OUT AMP
B/W
5.06M B.P.F
FL301 SFB-4141
IC 302 EHM-X6546Y08
70° SHIFTER
APC P-COMP
VCO (5.02M)
PHASE ROTATION
SUB BALANCE MODULATOR
4.43M X-TAL
1/2
1/4 RING DIVIDER
XT301
1.2M L.P.F
FL301 SFB-4141
VR2 (PRE AMP) REC C CURRENT
MIX
AMP
CURRENT AMP
CH1 HEAD
CH2 HEAD
LUMINANCE RECORDING
IC1 (PRE AMP) AN3331K

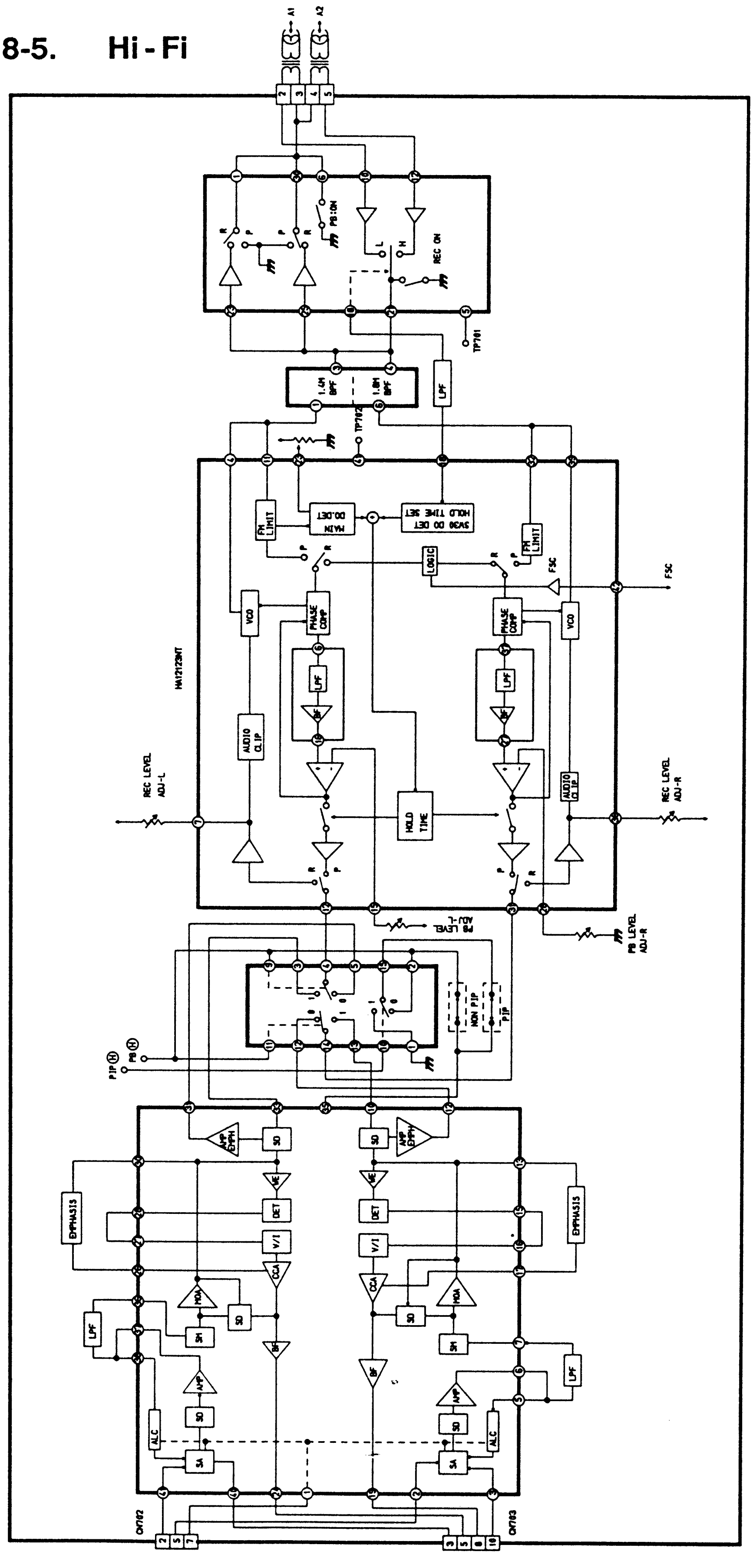
8-3-5 Skew Compensation


FSC
(4.43M)
X2
BALANCED MODULATOR
COLOR CTL
LPF
1/2
1/2H M.M
1/2
FL305
7.8KHZ
TUNING COIL
IC309
AN3592K
(SKEW DETECT)
7.8KHz TUNING AMP
SYNC SEPA
V.KILLER
2FH VCO
PHASE COMP
6DB
VIDEO OUT
TO
RF CONV
SCART JACK
BLUE BACK CTL
BLUE BACK
IC314
BA7021
(S/W)
0.5H DELAY SIGNAL
0.5H JUMP CTL
CHROMA OUT
APC ERROR
IC302
EHM-X6546Y08
(CHROMA PROCESS)
APC
D.O.P SW
(SUB PCB)
SIDE LOCK
DROP OUT PULSE
VIDEO OUT
CHROMA IN
IC308
MSM6989RS(0.5H CCD)
0.5 CCD
COMPOSITE VIDEO OUT
Y/C MIX
IC301
EHM-X6W78Y07
(LUMINANCE PROCESS)
ENV IN
(AGC)
ENV IN
630K BPF
IC81
BA7254S
(PRE AMP)

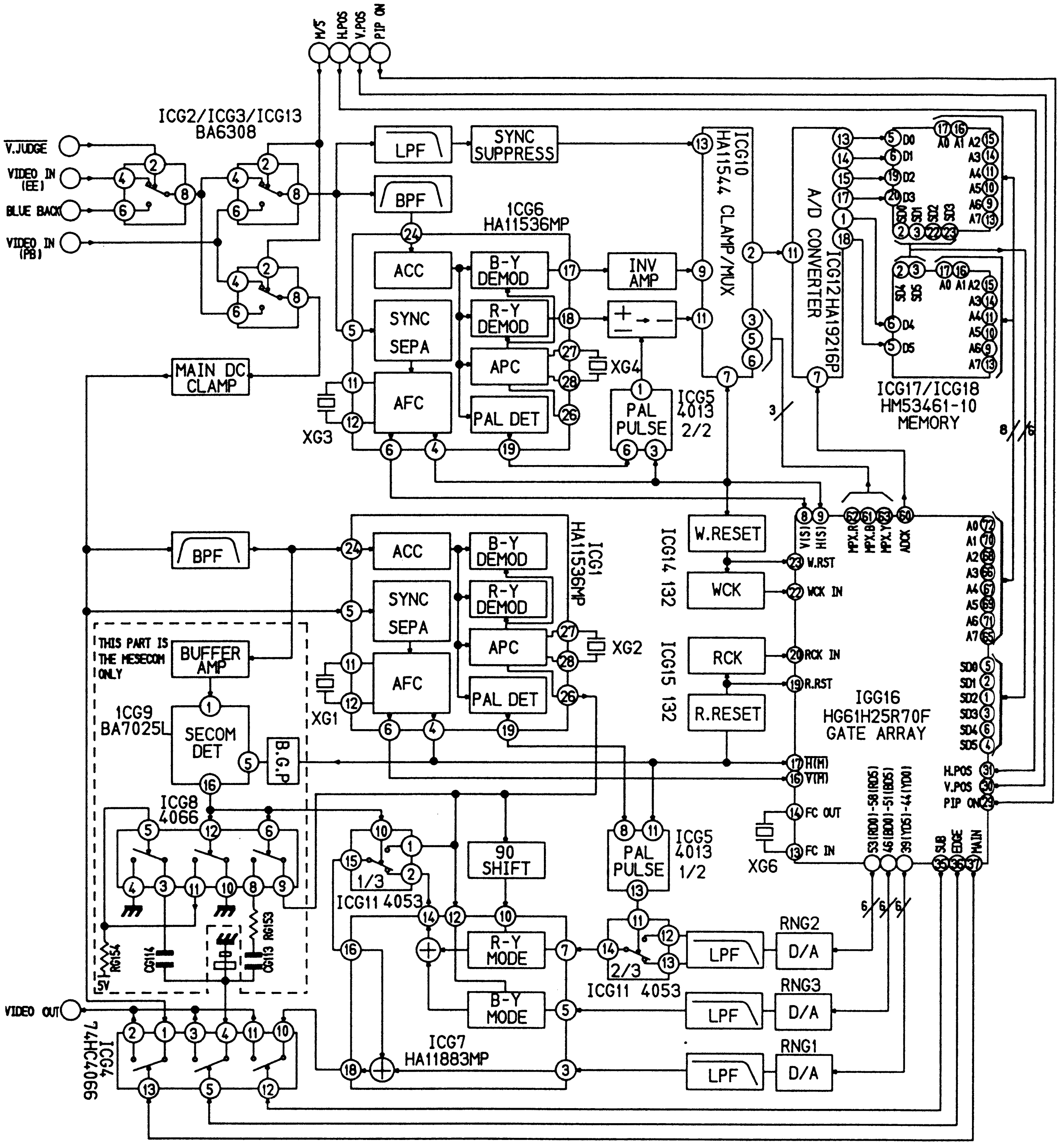
8-4. Audio & Input Output Select


CN804
A.PB
A REC
A/E H.D
CN803
F/E H.D
NON A REC ONLY
A REC ONLY
BIAS GENERATOR-1
BIAS GENERATOR-2
DL REC.V
MUTE CONT
LINE
REC MUTE
REC
PB
EE
ALC
REC/EE CONT
ALC DET
EE MUTE
PB MUTE
PC 12V
CNE01
CNE03
5V
NON PIP
PIP ONLY
HI FI L
NOM L
NOM R
HI FI R
LINE
VR
HI-FI DET
CNE07
A.MUTE
CNE08
ATT
EXT VIDEO IN
(L) AUDIO(IN) (R)
(L) AUDIO(OUT) (R)
VIDEO OUT

8-5. Hi - Fi


CN702
CN703
ALC
SA
SD
AMP
SM
MDA
LPF
EMPHASIS
AMP EMPH
BF
CCA
V/I
DET
ME
PIP Ⓗ
PB Ⓗ
NON PIP
PIP
PB LEVEL ADJ-L
PB LEVEL ADJ-R
REC LEVEL ADJ-L
REC LEVEL ADJ-R
HA12123NT
AUDIO CLIP
VCO
PHASE COMP
FM LIMIT
MAIN DO.DET
HOLD TIME
SW30 DO DET HOLD TIME SET
LOGIC
FSC
TP702
TP701
1.4M BPF
1.8M BPF
PB:ON
REC ON
R
P
L
H
A1
A2

8-6. PIP


M/S
H.POS
V.POS
PIP ON
V.JUDGE
VIDEO IN (EE)
BLUE BACK
VIDEO IN (PB)
ICG2/ICG3/ICG13
BA6308
MAIN DC CLAMP
LPF
SYNC SUPPRESS
BPF
ICG6
HA11536MP
ACC
B-Y DEMOD
R-Y DEMOD
SYNC SEPA
APC
AFC
PAL DET
XG3
XG4
INV AMP
ICG10
HA11544 CLAMP/MUX
ICG5
4013
2/2
PAL PULSE
ICG12HA19216P
A/D CONVERTER
ICG17/ICG18
HM53461-10
MEMORY
D0
D1
D2
D3
D4
D5
SD0
SD1
SD2
SD3
SD4
SD5
A0 A1 A2
A3
A4
A5
A6
A7
3
8
6
W.RESET
ICG14 132
WCK
ICG15 132
RCK
R.RESET
VISIA
HSIH
MPX.R
MPX.B
MPX.Y
ADCK
W.RST
WCK IN
RCK IN
R.RST
IGG16
HG61H25R70F
GATE ARRAY
H(M)
V(M)
FC OUT
FC IN
XG6
53(RD01-58(RD5)
46(BD01-51(BD5)
39(YD51-44(YD0)
H.POS
V.POS
PIP ON
SUB
EDGE
MAIN
ICG1
HA11536MP
XG1
XG2
THIS PART IS THE MESECOM ONLY
BUFFER AMP
ICG9
BA7025L
SECOM DET
B.G.P
ICG8
4066
RG154
CG114
CG113
RG153
5V
1/3
ICG11 4053
90 SHIFT
R-Y MODE
B-Y MODE
ICG7
HA11883MP
PAL PULSE
ICG5
4013
1/2
2/3
ICG11 4053
LPF
D/A
RNG2
RNG3
RNG1
VIDEO OUT
ICG4
74HC4066

9. CIRCUIT BOARDS

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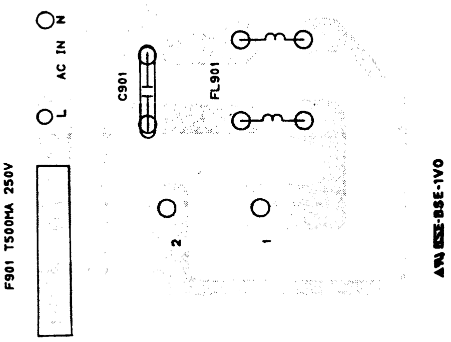
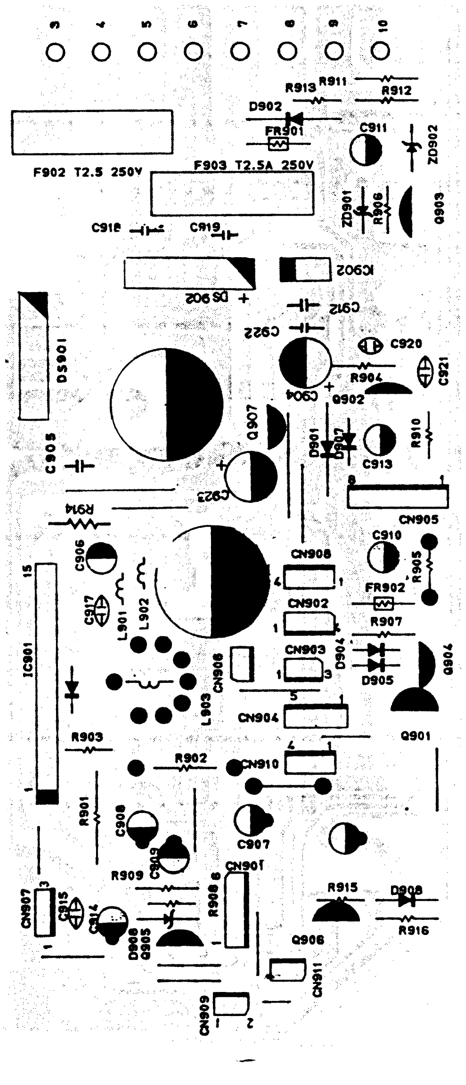
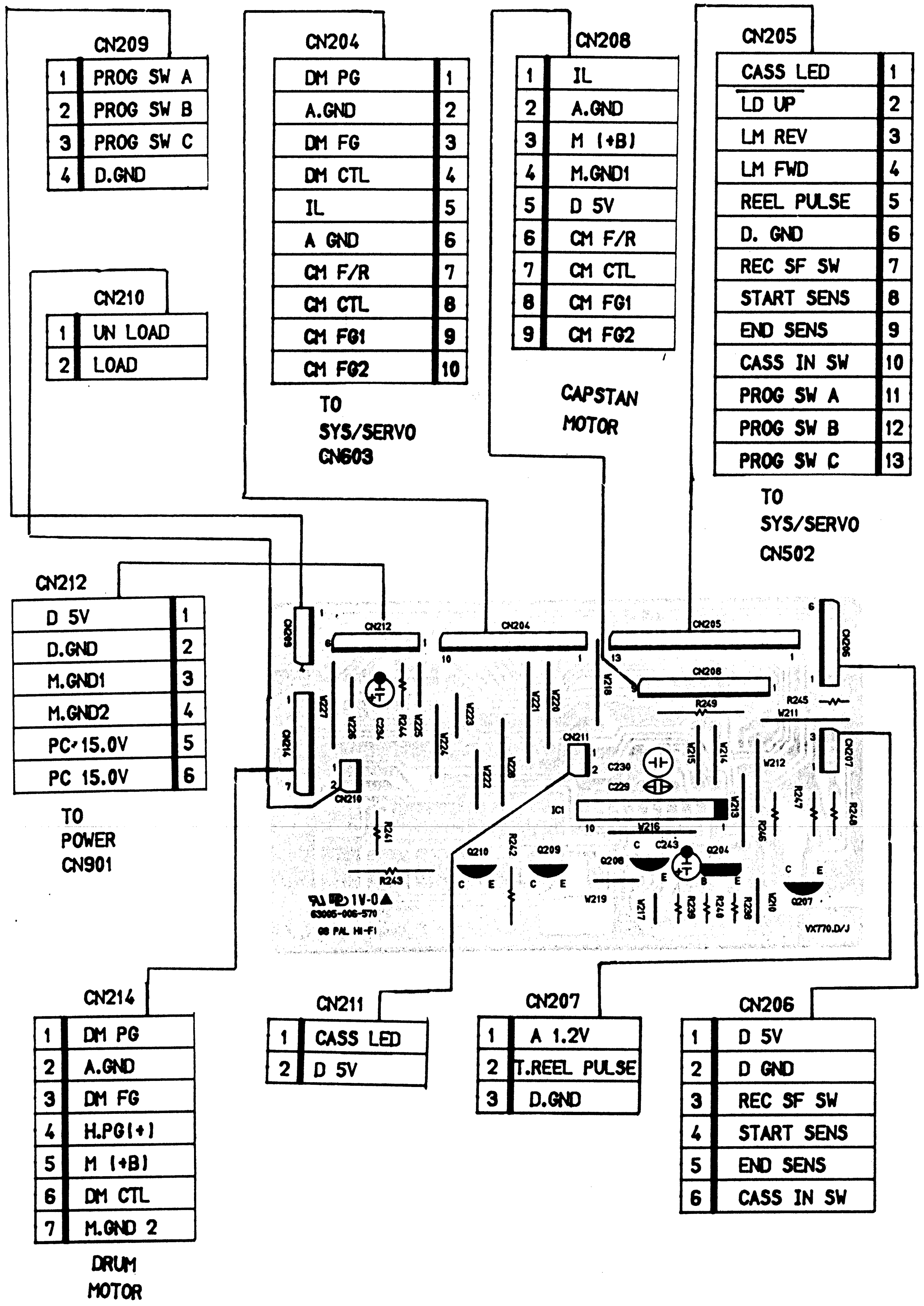
9-17. Function & Timer------------------ 9-10

9-1. Regulator

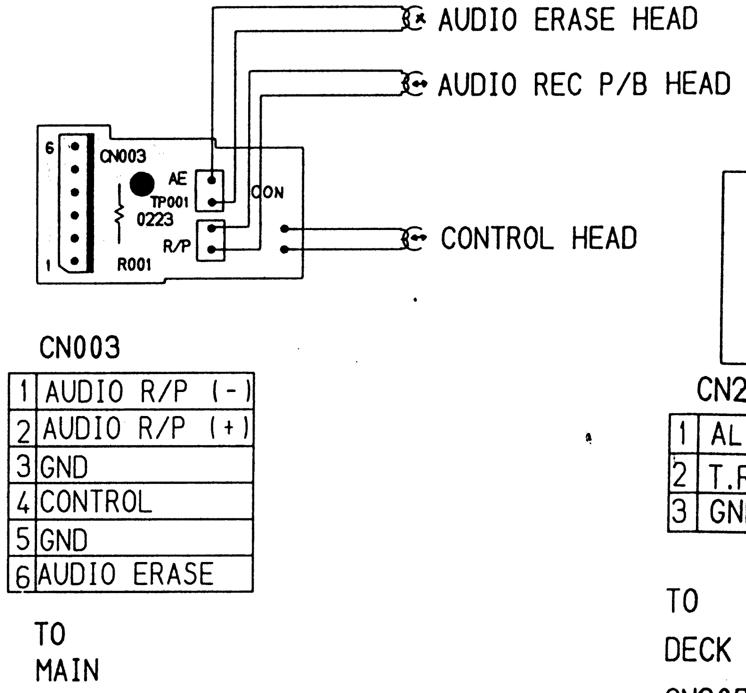

AC IN
L
N
C901
FL901
F901 T500MA 250V
1
2
-BSE-1V0


3
4
5
6
7
8
9
10
R911
R913
R912
D902
FR901
C911
ZD902
F902 T2.5 250V
F903 T2.5A 250V
ZD901
R906
Q903
C918
C919
IC902
DS902
C912
C922
C920
DS901
C904
R904
C921
Q902
Q907
D901
D907
R910
C913
C905
C923
CN905
R914
C910
C906
CN908
R905
FR902
CN902
R907
C917
L901
L902
CN903
D904
D905
Q904
IC901
15
CN906
L903
CN904
Q901
R903
R902
CN910
1
R901
C908
C907
R909
C909
CN901
R915
D908
CN907
C915
C914
R908
D906
Q905
R916
Q906
CN911
CN909

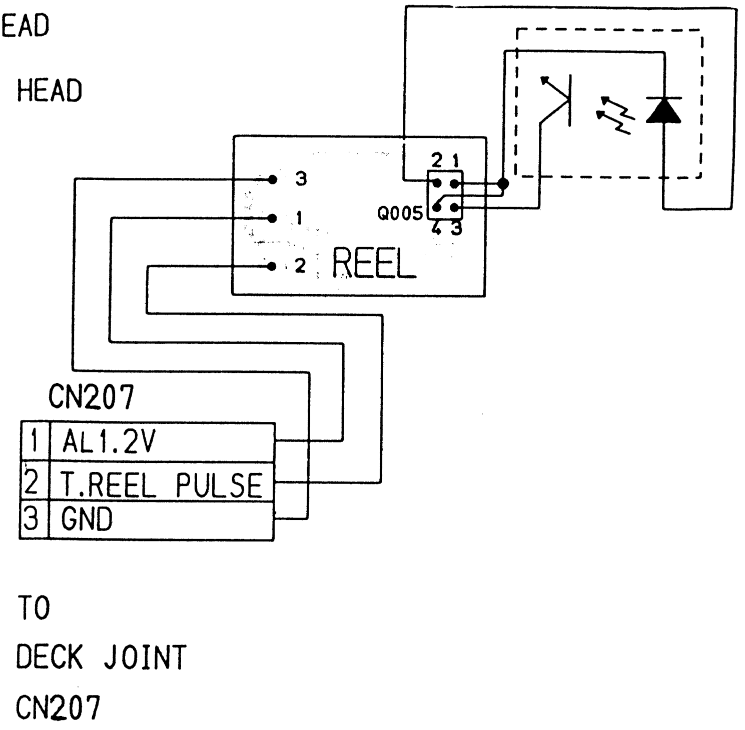
9-2. Deck Joint


CN209
1 PROG SW A
2 PROG SW B
3 PROG SW C
4 D.GND
CN210
1 UN LOAD
2 LOAD
CN204
DM PG 1
A.GND 2
DM FG 3
DM CTL 4
IL 5
A GND 6
CM F/R 7
CM CTL 8
CM FG1 9
CM FG2 10
TO SYS/SERVO CN603
CN208
1 IL
2 A.GND
3 M (+B)
4 M.GND1
5 D 5V
6 CM F/R
7 CM CTL
8 CM FG1
9 CM FG2
CAPSTAN MOTOR
CN205
CASS LED 1
LD UP 2
LM REV 3
LM FWD 4
REEL PULSE 5
D. GND 6
REC SF SW 7
START SENS 8
END SENS 9
CASS IN SW 10
PROG SW A 11
PROG SW B 12
PROG SW C 13
TO SYS/SERVO CN502
CN212
D 5V 1
D.GND 2
M.GND1 3
M.GND2 4
PC 15.0V 5
PC 15.0V 6
TO POWER CN901
CN214
1 DM PG
2 A.GND
3 DM FG
4 H.PG(+)
5 M (+B)
6 DM CTL
7 M.GND 2
DRUM MOTOR
CN211
1 CASS LED
2 D 5V
CN207
1 A 1.2V
2 T.REEL PULSE
3 D.GND
CN206
1 D 5V
2 D GND
3 REC SF SW
4 START SENS
5 END SENS
6 CASS IN SW
VX770.D/J

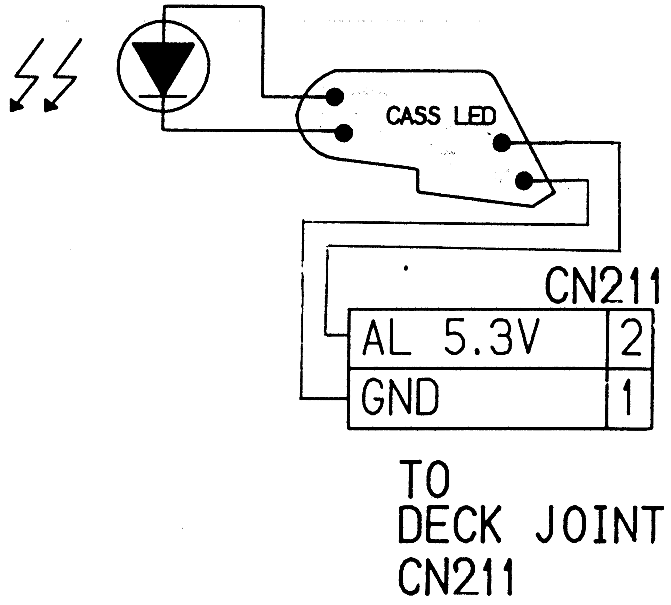
9-3. Audio/Control Head


AUDIO ERASE HEAD
AUDIO REC P/B HEAD
CONTROL HEAD
CN003
AE
TP001
0223
R/P
CON
R001
CN003
1 AUDIO R/P (-)
2 AUDIO R/P (+)
3 GND
4 CONTROL
5 GND
6 AUDIO ERASE
TO MAIN

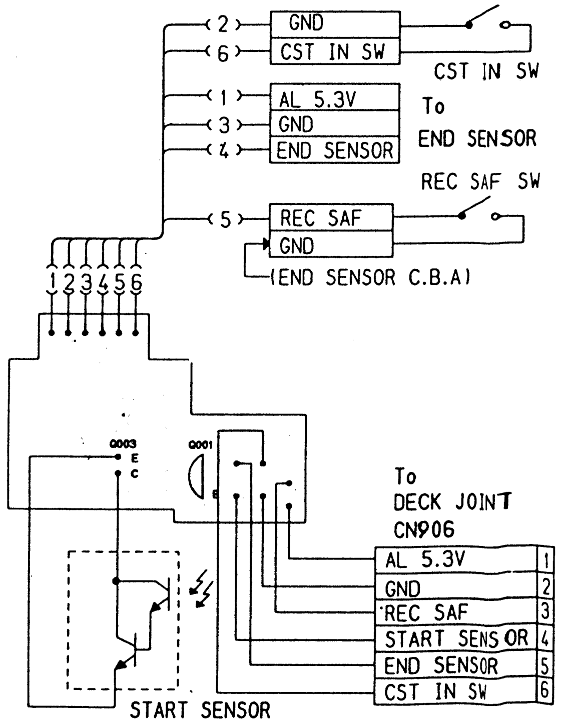
9-5. Reel Sensor


3
1
2 REEL
2 1
Q005
4 3
CN207
1 AL1.2V
2 T.REEL PULSE
3 GND
TO DECK JOINT CN207

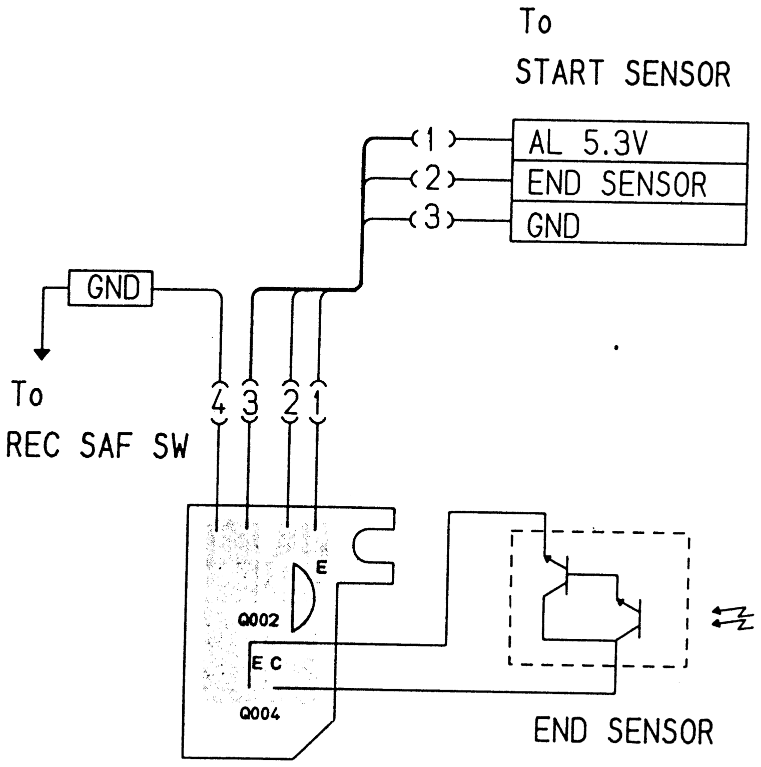
9-4. Cassette LED


CASS LED
CN211
AL 5.3V 2
GND 1
TO DECK JOINT CN211

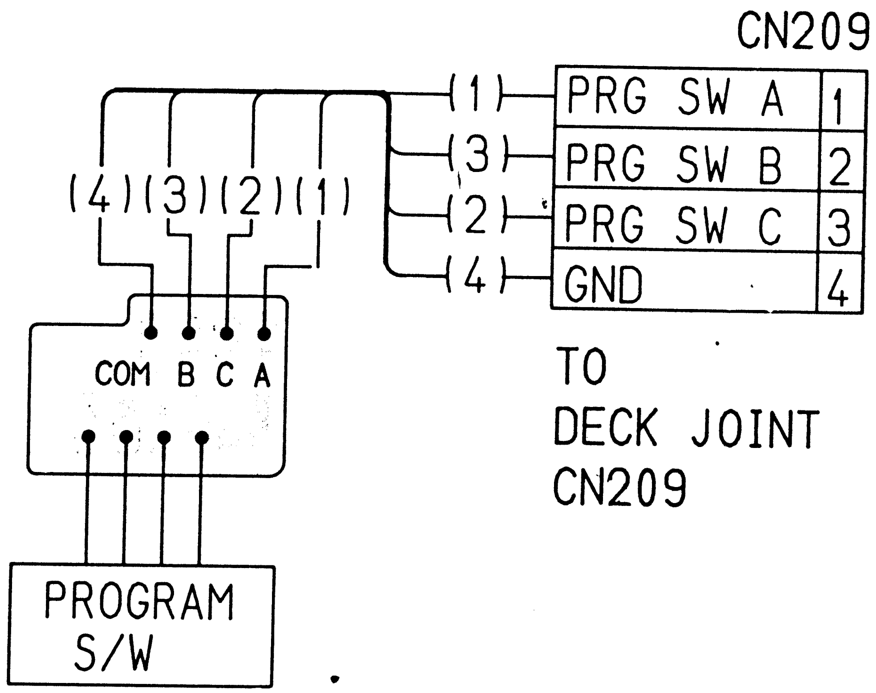
9-6. Start Sensor


2 GND
6 CST IN SW
CST IN SW
1 AL 5.3V
3 GND
4 END SENSOR
To END SENSOR
REC SAF SW
5 REC SAF
GND
(END SENSOR C.B.A)
1 2 3 4 5 6
Q003
Q001
To DECK JOINT CN906
AL 5.3V 1
GND 2
REC SAF 3
START SENSOR 4
END SENSOR 5
CST IN SW 6
START SENSOR

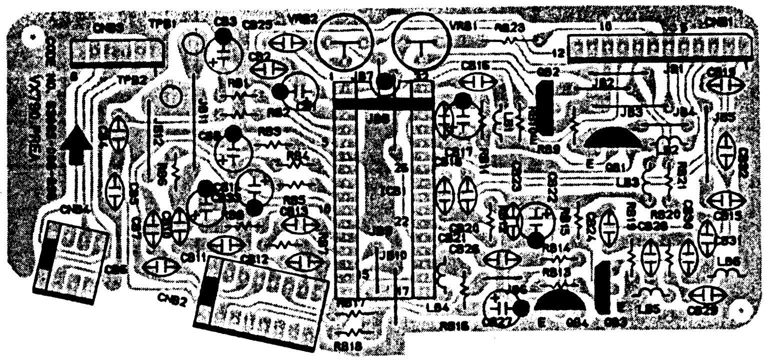
9-7. End Sensor


To
START SENSOR
(1) AL 5.3V
(2) END SENSOR
(3) GND
GND
To
REC SAF SW
4 3 2 1
E
Q002
E C
Q004
END SENSOR

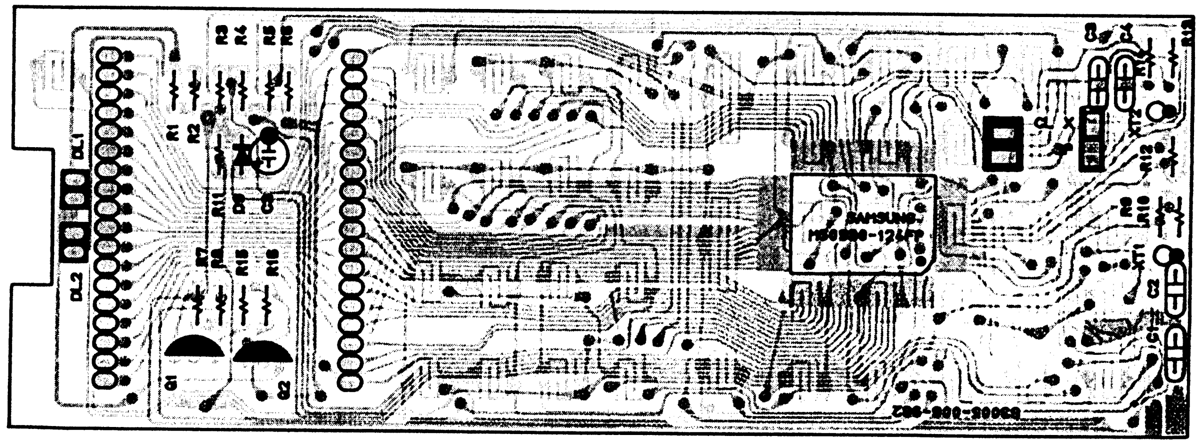
9-8. Program Switch


CN209
(1) PRG SW A 1
(3) PRG SW B 2
(2) PRG SW C 3
(4) GND 4
(4)(3)(2)(1)
COM B C A
PROGRAM
S/W
TO
DECK JOINT
CN209

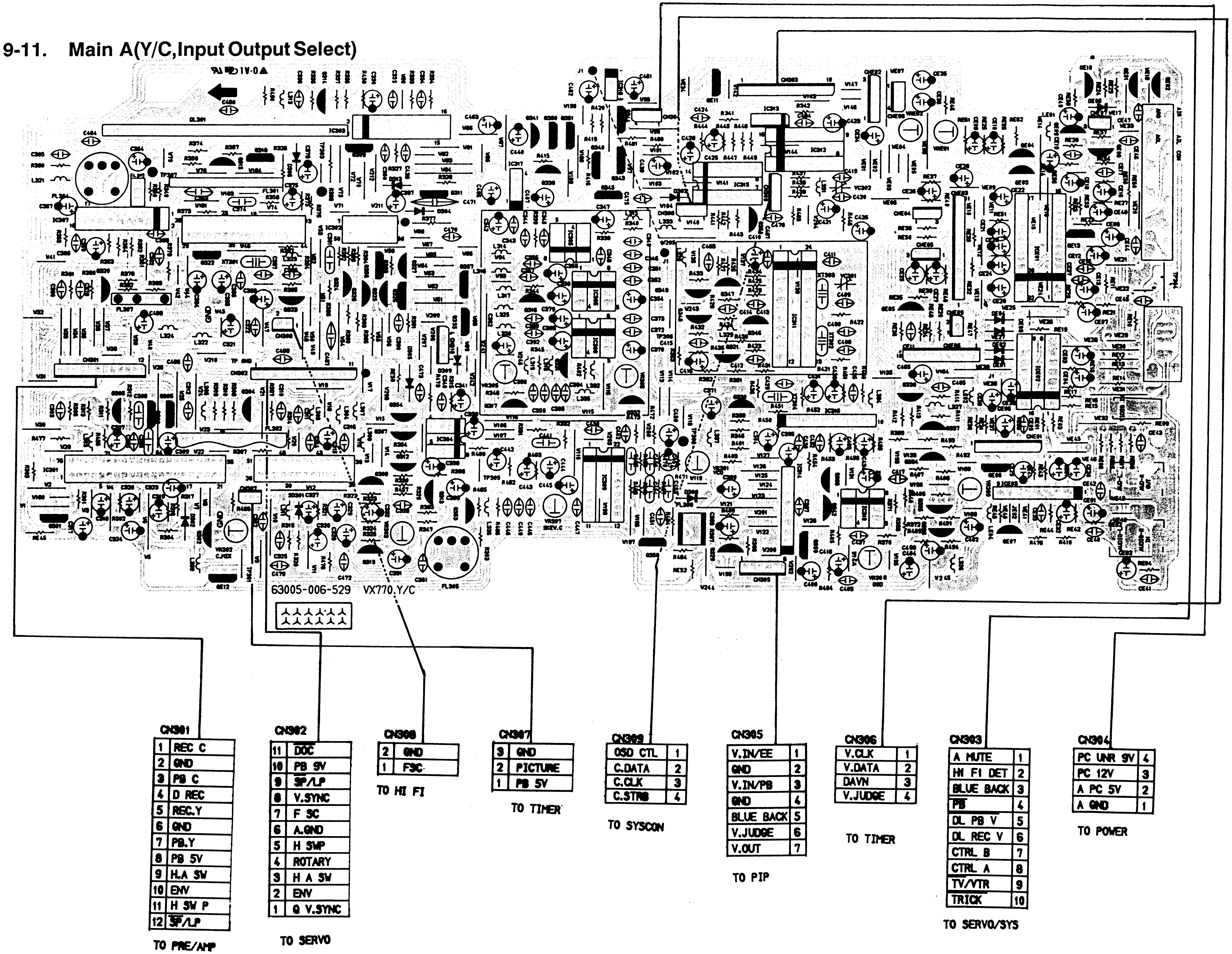
9-9. Pre AMP



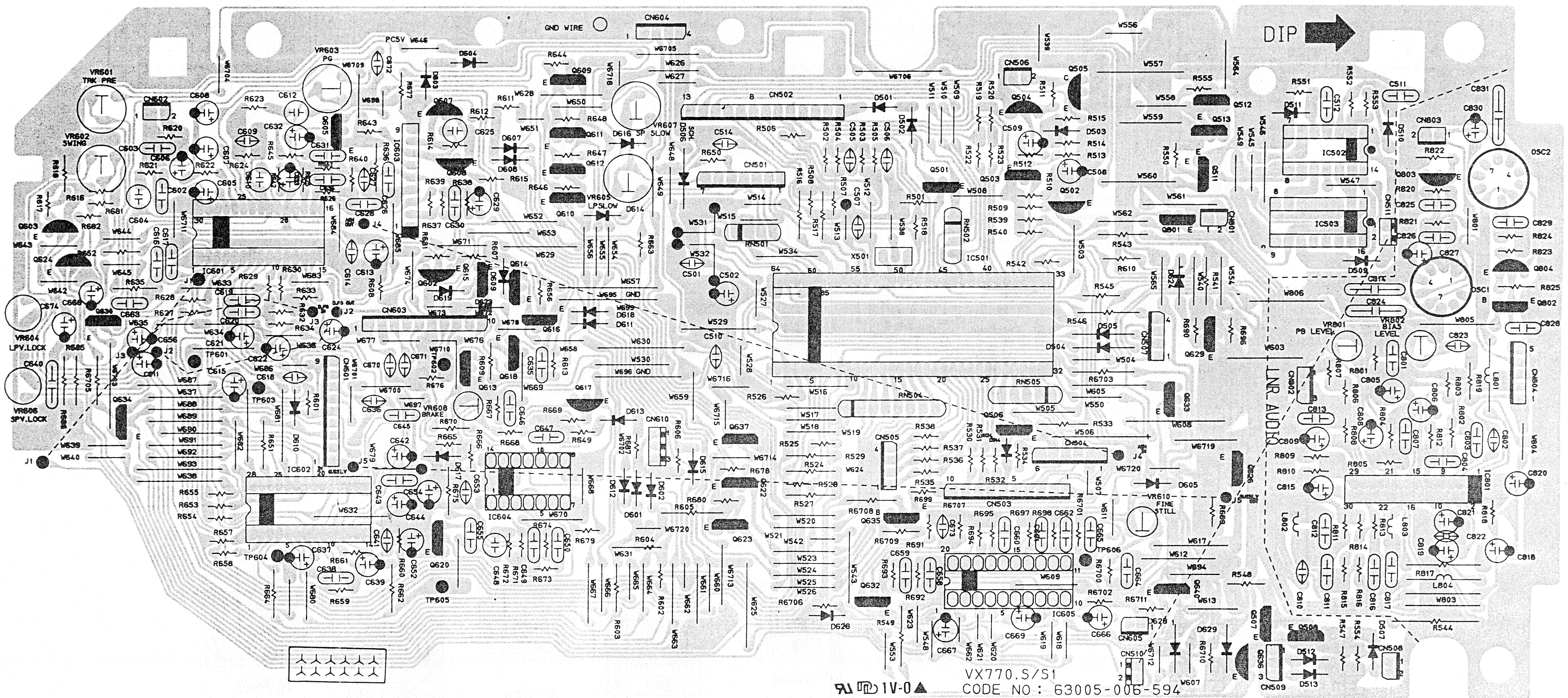
9-10. Remote Control



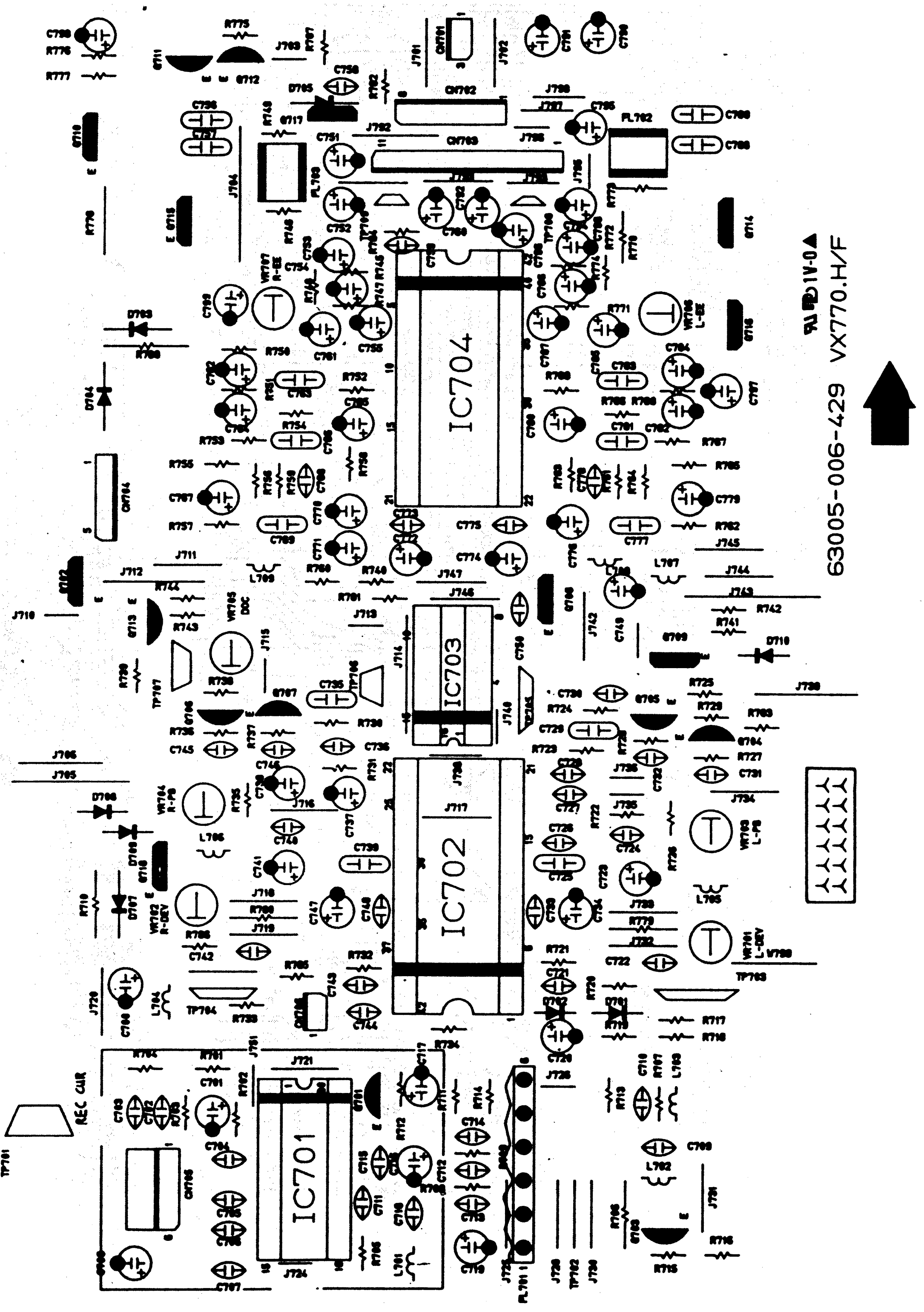
9-11. Main A(Y/C,Input Output Select)


63005-006-529 VX770.Y/C
CN301
1 REC C
2 GND
3 PB C
4 D REC
5 REC.Y
6 GND
7 PB.Y
8 PB 5V
9 H.A SW
10 ENV
11 H SW P
12 SP/LP
TO PRE/AMP
CN302
11 DOC
10 PB 9V
9 SP/LP
8 V.SYNC
7 F SC
6 A.GND
5 H SWP
4 ROTARY
3 H A SW
2 ENV
1 Q V.SYNC
TO SERVO
CN308
2 GND
1 FSC
TO HI FI
CN307
3 GND
2 PICTURE
1 PB 5V
TO TIMER
CN309
OSD CTL 1
C.DATA 2
C.CLK 3
C.STRB 4
TO SYSCON
CN305
V.IN/EE 1
GND 2
V.IN/PB 3
GND 4
BLUE BACK 5
V.JUDGE 6
V.OUT 7
TO PIP
CN306
V.CLK 1
V.DATA 2
DAVN 3
V.JUDGE 4
TO TIMER
CN303
A MUTE 1
HI FI DET 2
BLUE BACK 3
PB 4
DL PB V 5
DL REC V 6
CTRL B 7
CTRL A 8
TV/VTR 9
TRICK 10
TO SERVO/SYS
CN304
PC UNR 9V 4
PC 12V 3
A PC 5V 2
A GND 1
TO POWER

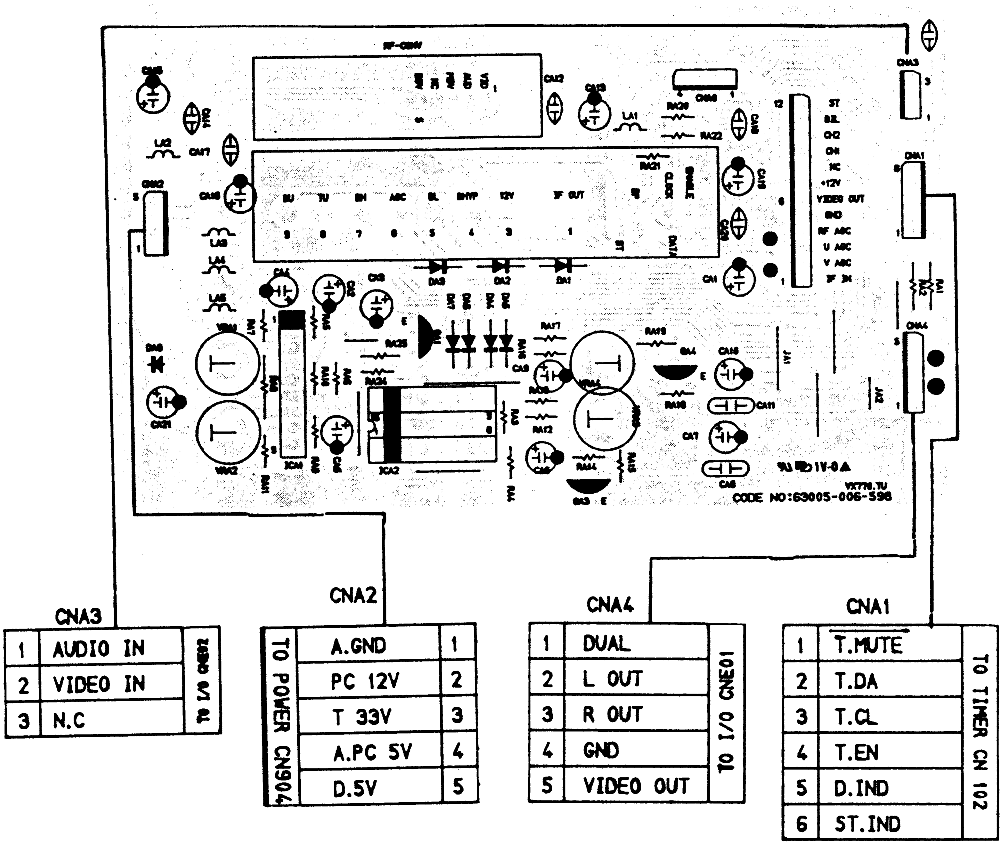
9-12. Main B (Syscon/Servo,Audio)


DIP
GND WIRE
CN604
PC5V
VR601 TRK PRE
VR602 SWING
VR603 PG
VR604 LPV.LOCK
VR606 SPV.LOCK
VR605 LPSLOW
VR607 SP SLOW
VR608 BRAKE
VR610 FINE STILL
VR801 PB LEVEL
VR802 BIAS LEVEL
LNR AUDIO
IC501
IC502
IC503
IC601
IC602
IC603
IC604
IC605
IC801
CN501
CN502
CN503
CN504
CN505
CN506
CN507
CN508
CN509
CN510
CN601
CN603
CN610
CN801
CN802
CN803
OSC1
OSC2
X501
RN501
RN502
RN504
RN505
TP601
TP602
TP603
TP604
TP605
TP606
J1
J2
J3
J4
J5
W696 GND
W695 GND
VX770.S/S1
CODE NO : 63005-006-594
1V-0

9-13. Main C (Hi-Fi)


IC704
IC703
IC702
IC701
63005-006-429 VX770.H/F
REC CUR
TP701

9-14. Tuner (VX-SERIES)



RF-CON
CNA3
CNA2
CNA1
CNA4
ICA1
ICA2
VRA1
VRA2
VRA3
VRA4
DA1
DA2
DA3
ST
SIL
+12V
VIDEO OUT
GND
RF AGC
U AGC
V AGC
IF IN
VX770.TU
CODE NO:63005-006-598

CNA3

1	AUDIO IN	TO I/O CNE02
2	VIDEO IN	
3	N.C	

CNA2

TO POWER CN904	A.GND	1
	PC 12V	2
	T 33V	3
	A.PC 5V	4
	D.5V	5

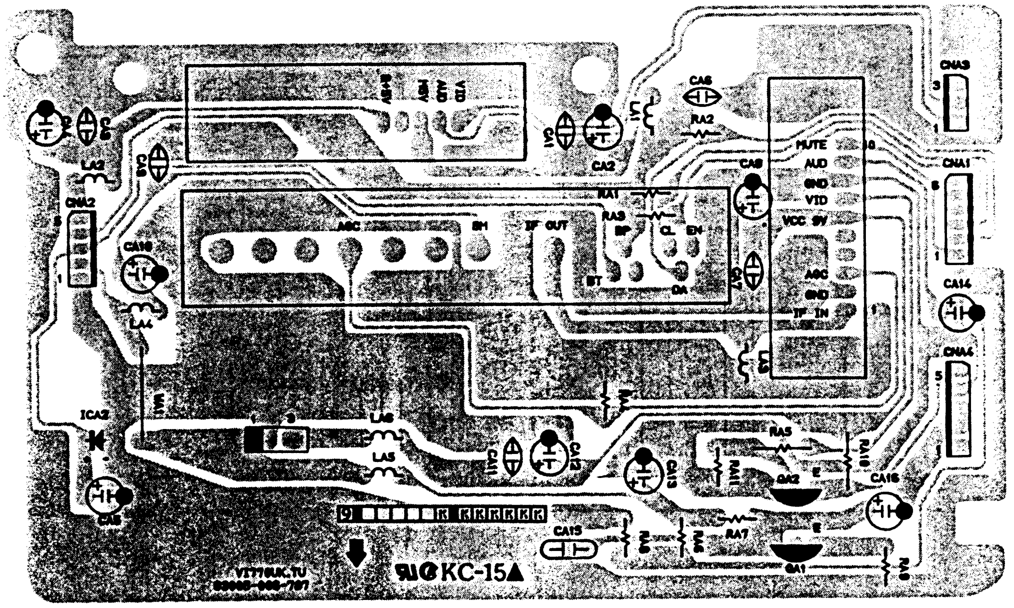
CNA4

1	DUAL	TO I/O CNE01
2	L OUT	
3	R OUT	
4	GND	
5	VIDEO OUT	

CNA1

1	T.MUTE	TO TIMER CN 102
2	T.DA	
3	T.CL	
4	T.EN	
5	D.IND	
6	ST.IND	

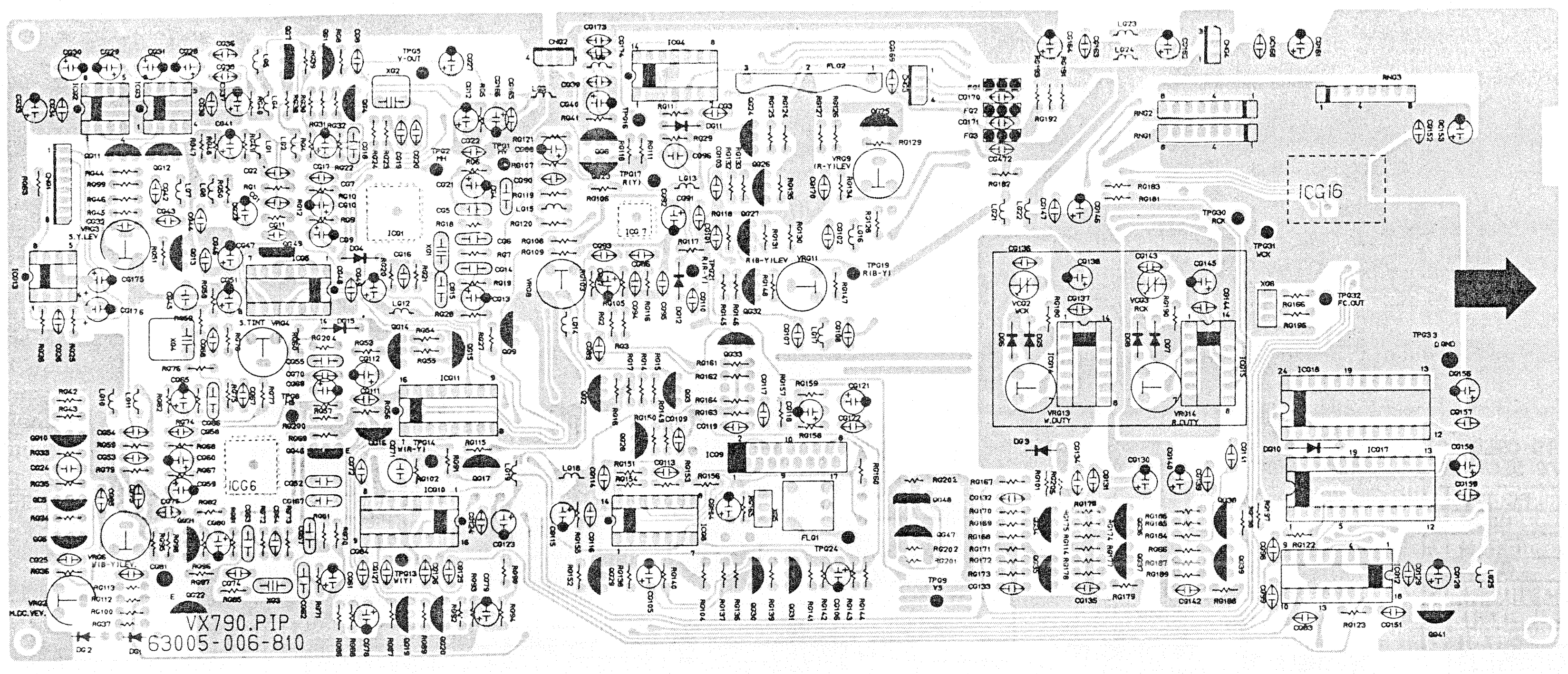
9-15. Tuner (VI-SERIES)



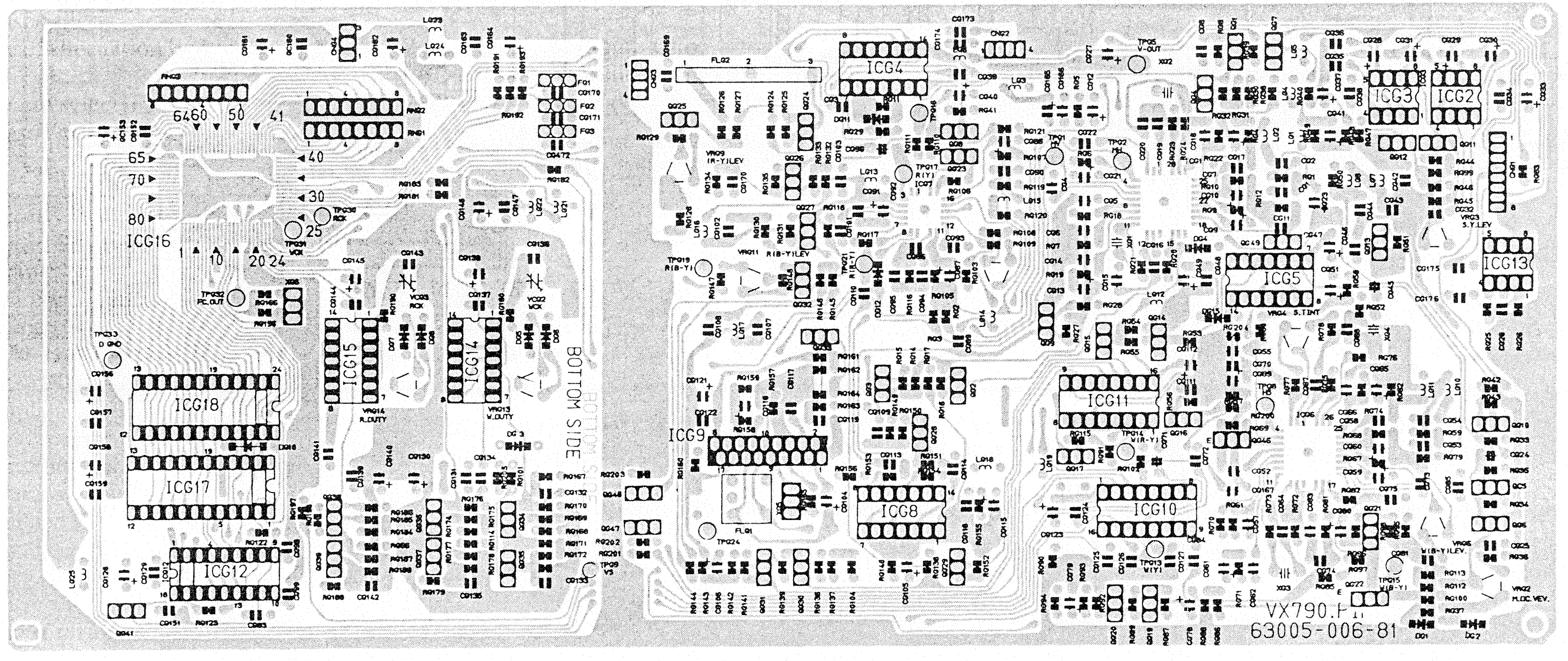
CNA3
CNA1
CNA2
CNA4
CA14
CA16
CA15
ICA2
QA1
QA2
MUTE
AUD
GND
VID
VCC 9V
AGC
IF IN
AGC
BM
IF OUT
KC-15▲
VI770UK.TU

9-16. PIP

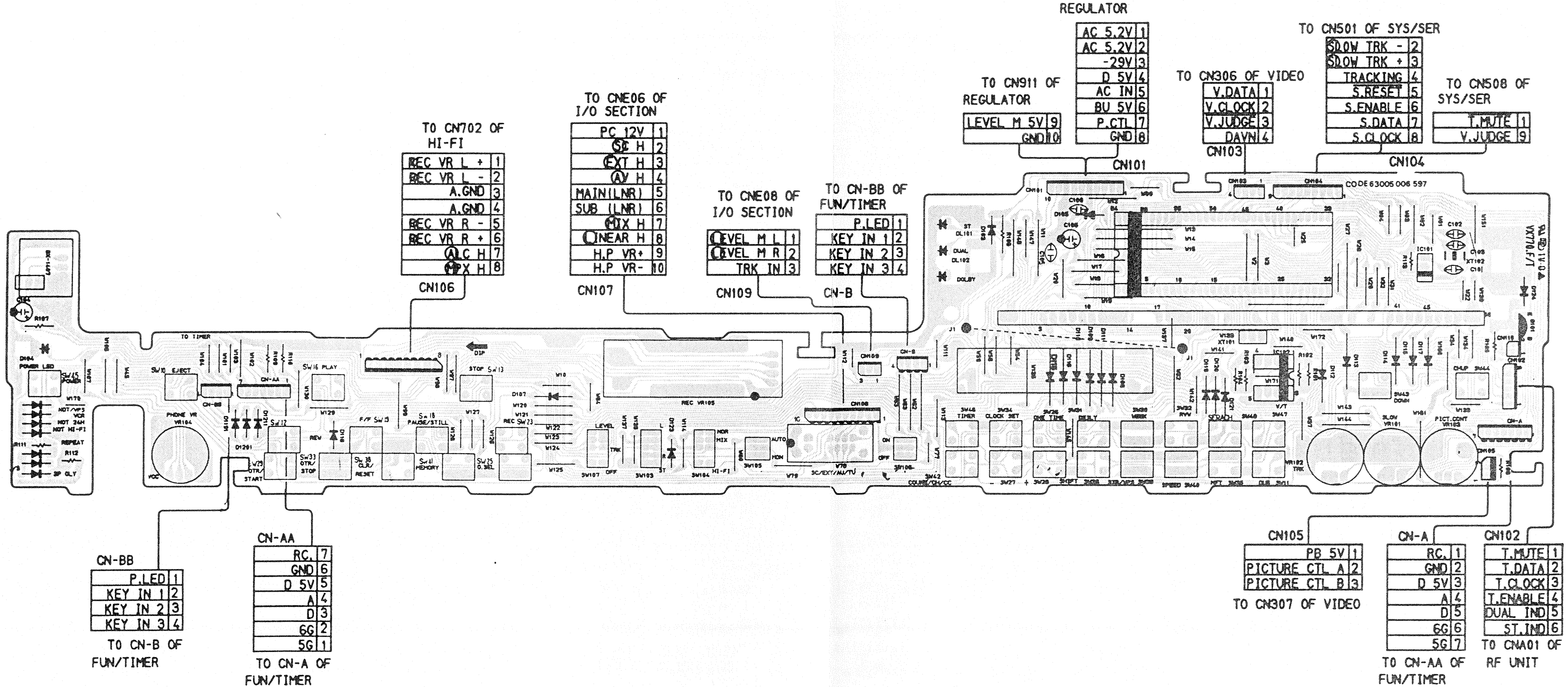
TOP SIDE


ICG16
VX790.PIP
63005-006-810

BOTTOM SIDE


ICG16
ICG18
ICG17
ICG12
ICG15
ICG14
ICG4
ICG3
ICG2
ICG5
ICG13
ICG9
ICG11
ICG8
ICG10
BOTTOM SIDE
VX790.PIP
63005-006-81

9-17. Function & Timer


REGULATOR
AC 5.2V 1
AC 5.2V 2
-29V 3
D 5V 4
AC IN 5
BU 5V 6
P.CTL 7
GND 8
TO CN911 OF REGULATOR
LEVEL M 5V 9
GND 10
CN101
TO CN306 OF VIDEO
V.DATA 1
V.CLOCK 2
V.JUDGE 3
DAVN 4
CN103
TO CN501 OF SYS/SER
SLOW TRK - 2
SLOW TRK + 3
TRACKING 4
S.RESET 5
S.ENABLE 6
S.DATA 7
S.CLOCK 8
TO CN508 OF SYS/SER
T.MUTE 1
V.JUDGE 9
CN104
CODE 63005 006 597
TO CN702 OF HI-FI
REC VR L + 1
REC VR L - 2
A.GND 3
A.GND 4
REC VR R - 5
REC VR R + 6
ALC H 7
MPX H 8
CN106
TO CNE06 OF I/O SECTION
PC 12V 1
SC H 2
EXT H 3
AV H 4
MAIN(LNR) 5
SUB (LNR) 6
MIX H 7
LINEAR H 8
H.P VR+ 9
H.P VR- 10
CN107
TO CNE08 OF I/O SECTION
LEVEL M L 1
LEVEL M R 2
TRK IN 3
CN109
TO CN-BB OF FUN/TIMER
P.LED 1
KEY IN 1 2
KEY IN 2 3
KEY IN 3 4
CN-B
CN-BB
P.LED 1
KEY IN 1 2
KEY IN 2 3
KEY IN 3 4
TO CN-B OF FUN/TIMER
CN-AA
RC. 7
GND 6
D 5V 5
A 4
D 3
6G 2
5G 1
TO CN-A OF FUN/TIMER
CN105
PB 5V 1
PICTURE CTL A 2
PICTURE CTL B 3
TO CN307 OF VIDEO
CN-A
RC. 1
GND 2
D 5V 3
A 4
D 5
6G 6
5G 7
TO CN-AA OF FUN/TIMER
CN102
T.MUTE 1
T.DATA 2
T.CLOCK 3
T.ENABLE 4
DUAL IND 5
ST.IND 6
TO CNA01 OF RF UNIT
SW45 POWER
SW10 EJECT
SW16 PLAY
STOP SW13
F/F SW15
SW18 PAUSE/STILL
REC SW23
REW
SW33 OTR/STOP
SW38 CLR/RESET
SW41 MEMORY
SW25 O.SEL
PHONE VR VR104
REC VR105
SW107
SW103
SW104 HI-FI
SW105
SC/EXT/AU/TV
COURSE/CH/CC
TIMER
CLOCK SET
ONE TIME
DAILY
WEEK
RVW
SCRACH
SHIFT
SPEED
DUB
SLOW VR101
PICT.CONT VR102
DOWN
CHUP
D104 POWER LED
REPEAT
SP
TO TIMER
DOLBY
DUAL
ST
XYJ70.F/T

10. SCHEMATIC DIAGRAMS

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10-4. Hi-Fi Audio---------------------- 10-7

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10-6. Liner Audio---------------------- 10-10

10-7. Pre Amp------------------------- 10-10

10-8. Tuner (VX-SERIES)--------------- 10-11

10-9. Tuner (VI-SERIES)--------------- 10-11

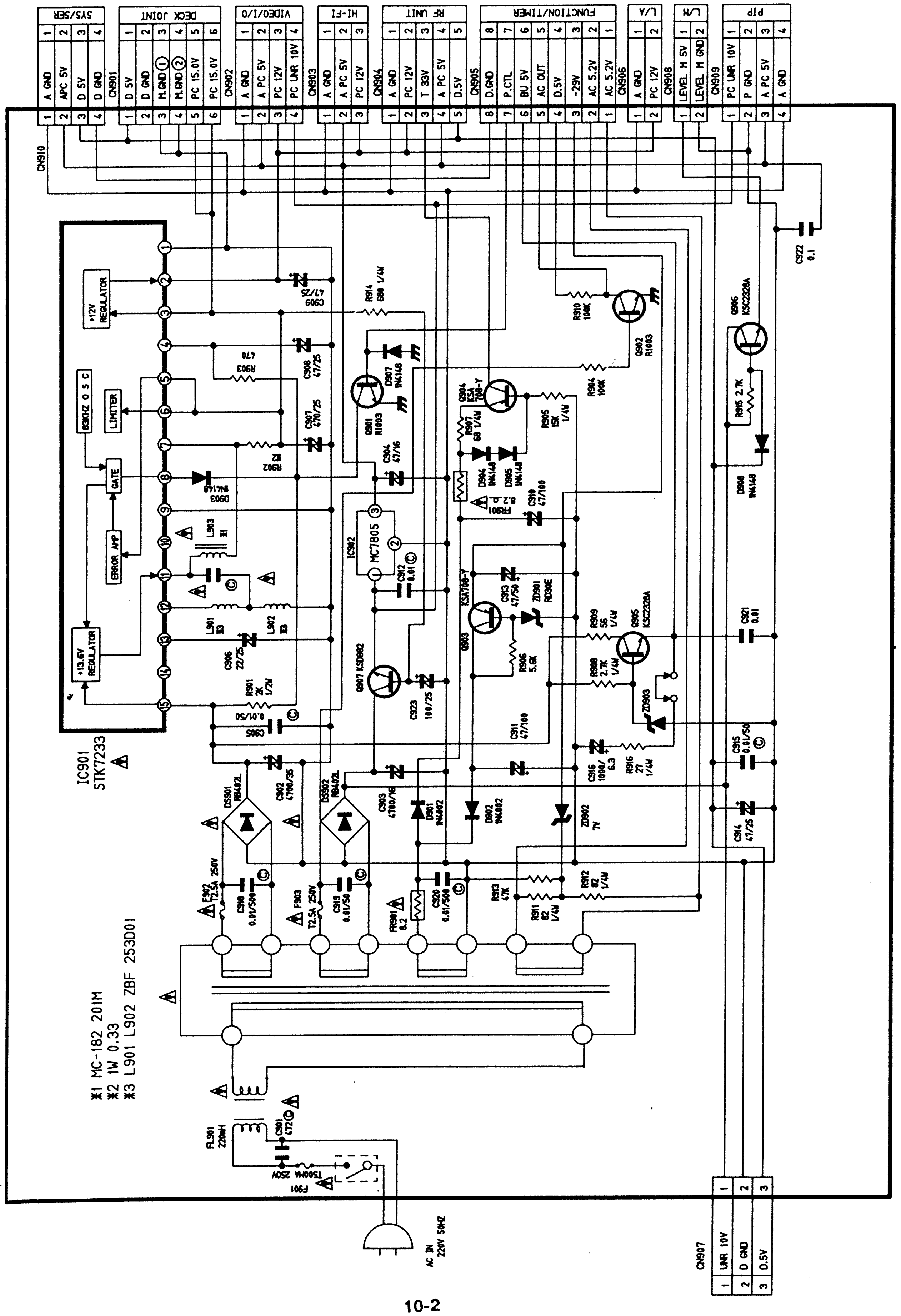
10-10. Function / Timer---------------- 10-12

10-11. Deck Joint--------------------- 10-13

10-12. Remote Control----------------- 10-13

10-13. Luminance/Chrominance--------- 10-14

10-1. Regulator


SYS/SER
DECK JOINT
VIDEO/I/O
HI-FI
RF UNIT
FUNCTION/TIMER
L/A
L/M
PIP
A GND
APC 5V
D 5V
D GND
M.GND①
M.GND②
PC 15.0V
A PC 5V
PC 12V
PC UNR 10V
T 33V
D.5V
D.GND
P.CTL
BU 5V
AC OUT
-29V
AC 5.2V
LEVEL M 5V
LEVEL M GND
P GND
CN901
CN902
CN903
CN904
CN905
CN906
CN908
CN909
CN910
CN907
UNR 10V
D GND
D.5V
+12V REGULATOR
80KHZ O S C
LIMITER
GATE
ERROR AMP
+13.6V REGULATOR
IC901
STK7233
IC902
MC7805
Q901 R1003
Q902 R1003
Q903 KSA708-Y
Q904 KSA708-Y
Q905 KSC2328A
Q906 KSC2328A
Q907 KSD882
DS901
DS902
FR901 0.2
AC IN
220V 50HZ
F901
T500mA 250V
F902 T2.5A 250V
F903 T2.5A 250V
FL901
※1 MC-182 201M
※2 1W 0.33
※3 L901 L902 ZBF 253D01

TR REGULATOR C.B.A															
MODE	REC			PB			STOP			FF			RWD		
TR NO.	B	B	C	B	B	C	B	B	C	B	B	C	B	B	C
Q 901	0	15.6	0	0	15.6	0	0	15.6	0	0	15.6	0	0	15.6	0
Q 903	-41.9	-30.2	-29.6	-41.9	-30.2	-29.6	-41.9	-30.2	-29.6	-41.9	-30.2	-29.6	-41.9	-30.2	-29.6
Q 904	-41.9	-40.9	-31.8	-41.9	-40.9	-31.8	-41.9	-40.9	-31.8	-41.9	-40.9	-31.8	-41.9	-40.9	-31.8
Q 906	5.06	5.64	9.45	5.06	5.64	9.45	5.06	5.64	9.45	5.06	5.64	9.45	5.06	5.64	9.45
Q 907	9.35	9.21	9.94	9.35	9.21	9.94	9.35	9.21	9.94	9.35	9.21	9.94	9.35	9.21	9.94
Q 909	5.06	5.64	17.8	5.06	5.64	17.8	5.06	5.64	17.8	5.06	5.64	17.8	5.06	5.64	17.8

IC901 REGULATOR C.B.A					
PIN NO	STOP	PLAY	REC	F F	REW
1	0	0	0	0	0
2	11.9	11.9	11.9	11.9	11.9
3	15.0	15.0	15.0	15.0	15.0
4	14.8	14.8	14.8	14.8	14.8
5	15.0	15.0	15.0	15.0	15.0
6	15.0	15.0	15.0	15.0	15.0
7	15.1	15.1	15.1	15.1	15.1
8	3.7	3.7	3.7	3.7	3.7
9	0	0	0	0	0
10	0	0	0	0	0
11	15.2	15.2		15.2	15.2
12	0	0	0	0	0
13	7.9	7.9	7.9	7.9	7.9
14	0	0	0	0	0
15	19.1	19.1		19.1	19.1

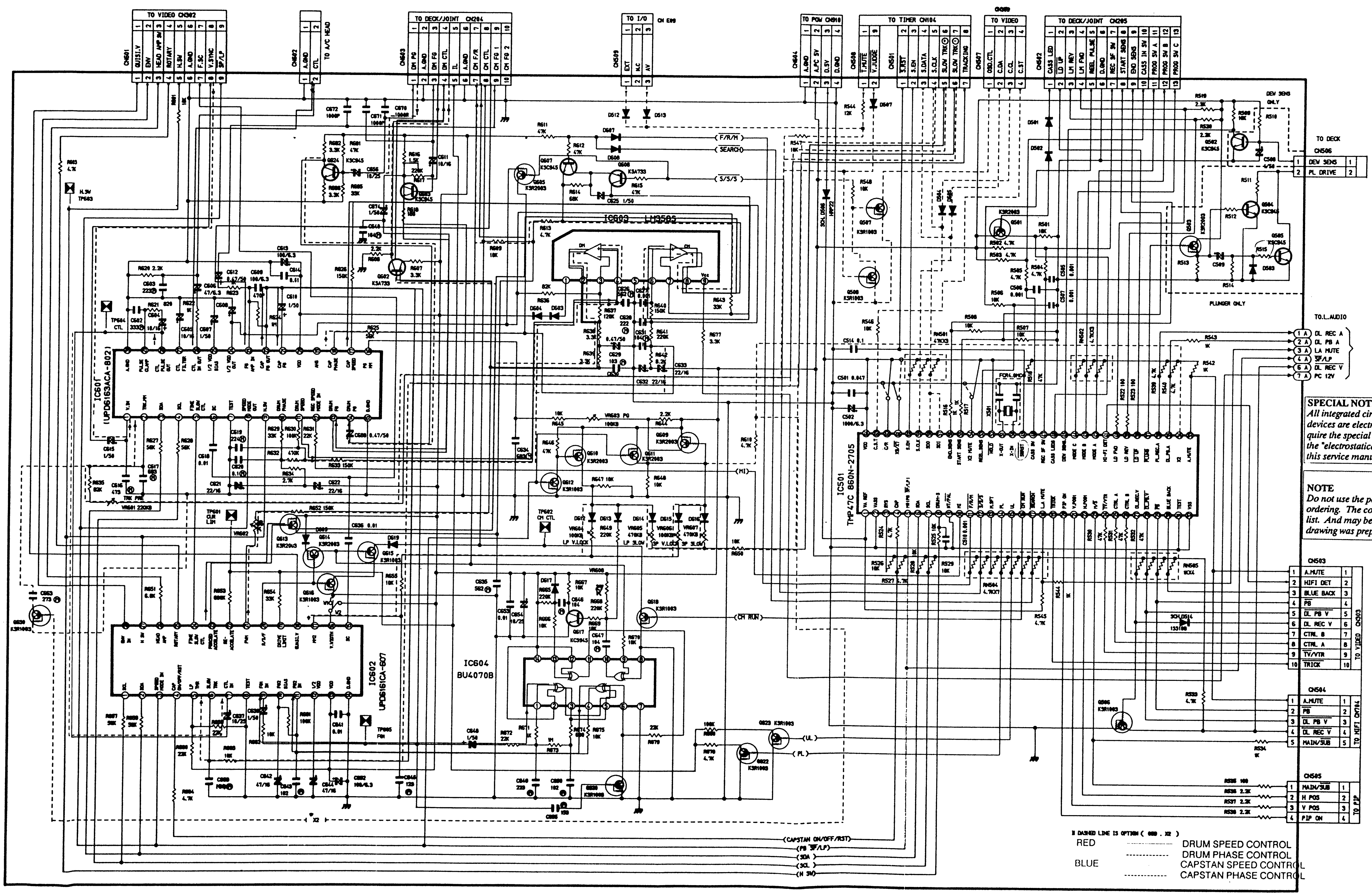
IC902 REGULATOR C.B.A					
PIN NO	STOP	PLAY	REC	F F	REW
1	9.2	9.2	9.2	9.2	9.2
2	0	0	0	0	11.9
3	5.0	5.0	5.0	5.0	15.0

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

IMPORTANT SAFETY NOTICES
Components identified with the mark ⚠ have the special charateristics for safety when replacing any of these components. Use only the same type.

10-2. System Control / Servo


TO VIDEO CN302
CN601
TO A/C HEAD
CN602
TO DECK/JOINT CN204
CN603
TO I/O
CN509
TO PW CN910
CN644
CN508
TO TIMER CN104
CN501
TO VIDEO
CN507
TO DECK/JOINT CN205
CN502
TO DECK
CN506
DEW SENS
PL DRIVE
TO L.AUDIO
DL REC A
DL PB A
LA MUTE
SP/LP
DL REC V
PC 12V
IC601 UPD6163ACA-B021
IC603 LM358S
IC501 TMP47C 860N-2705
IC602 UPD6161CA-607
IC604 BU4070B
F/R/H
SEARCH
S/S/S
CH RUN
UL
PL
CAPSTAN ON/OFF/RST
PB SP/LP
SDA
SCL
H SW
PLUNGER ONLY
CN503
A.MUTE
HIFI DET
BLUE BACK
PB
DL PB V
DL REC V
CTRL B
CTRL A
TV/VTR
TRICK
TO VIDEO CN303
CN504
A.MUTE
PB
DL PB V
DL REC V
MAIN/SUB
TO HIFI CN704
CN505
MAIN/SUB
H POS
V POS
PIP ON
TO PIP
※ DASHED LINE IS OPTION (680 . X2)
RED
DRUM SPEED CONTROL
DRUM PHASE CONTROL
BLUE
CAPSTAN SPEED CONTROL
CAPSTAN PHASE CONTROL

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

IC501(TMP47P8606N) MAIN "B" (SYSCON) C.B.A

PIN NO	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S
1	4.7	4.8	4.7	4.7	4.7	4.7	4.7
2	0	0	0	0	0	0	0
3	0	0	0	3.6	0	3.6	0
4	0	5.0	4.9	5.0	5.0	4.9	4.9
5	0	0	0	0	0	0	0
6	4.9	5.0	4.9	4.9	4.9	4.9	4.9
7	4.9	5.0	4.9	4.9	4.9	4.9	4.9
8	-	-	-	-	-	-	-
9	0	0	0	0	0	0	0
10	4.9	5.0	4.9	4.9	4.9	4.9	4.9
11	5.0	5.0	4.9	0	0	4.9	4.9
12	5.0	5.0	4.9	5.0	5.0	4.9	4.9
13	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
16	4.3	0	0	0	0	0	0
17	5.0	5.0	4.9	5.0	5.0	0	0
18	0	0	0	0	0	4.5	4.5
19	4.8	4.8	4.8	4.8	4.8	0	0
20	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-
23	-	4.8	4.7	4.7	4.7	4.7	4.7
24	4.7	4.8	4.7	4.7	4.7	4.7	4.7
25	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0
27	0	4.5	0	0	0	0	0
28	4.4	4.5	0	4.4	4.4	0	0
29	4.7	5.0	0.2	4.7	4.7	0.2	0.2
30	4.6	0	0	4.6	4.6	0	0
31	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0
33	0	0	0	0	0	3.9	3.9
34	-	-	-	-	-	-	-
35	0	0	4.6	0	0	4.7	4.7
36	0	4.6	0	0	0	0	0
37	4.7	4.7	4.7	4.7	4.7	4.7	4.7
38	0	3.5	3.5	9.1	9.3	3.5	3.5
39	2.8	2.9	2.8	2.8	2.8	2.8	2.8
40	2.8	2.9	2.8	2.8	2.8	2.8	2.8
41	0.6	0.7	3.7	0.6	0.6	3.7	3.7
42	0	4.7	4.7	4.7	4.7	0	4.7
43	4.7	0	0	0	0	4.7	0
44	0	4.7	4.7	0	0	4.7	4.7
45	4.7	4.8	4.7	4.7	4.7	4.7	4.7
46	0	0	0	0	0	0	0
47	0	4.8	0	0	0	0	0
48	4.7	4.8	4.7	4.7	4.7	4.7	4.7
49	4.7	4.7	4.7	4.7	4.7	4.7	4.7
50	2.1	2.2	2.1	2.1	2.1	2.2	2.2
51	2.3	2.4	2.3	2.3	2.3	2.3	2.3
52	4.7	4.8	4.7	4.7	4.7	4.7	4.7
53							
54	4.7	4.8	4.7	4.7	4.7	4.7	4.7
55	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
57	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-
61	0	0	0	0	0	0	0
62	4.7	4.8	4.7	4.7	4.7	4.7	4.7
63	-	-	-	-	-	-	-
64	4.7	4.8	4.7	4.7	4.7	4.7	4.7

IC601(UPD6163ACA-802) MAIN "B" (SERVO) C.B.A

PIN NO	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
1	2.8	2.7	2.7	2.7	2.7	2.7	2.7
2	-	-	-	-	-	-	-
3	4.9	4.9	4.9	4.9	4.9	4.9	4.9
4	4.9	4.9	4.9	4.9	4.9	4.9	4.9
5	-	-	-	-	-	-	-
6	2.5	2.6	2.5	2.5	2.5	2.5	2.5
7	0	0	0	0	0	0	0
8	0	-	-	0	0	-	-
9	0	-	-	-	-	-	-
10	2.5	2.0	2.2	2.5	2.5	2.2	2.2
11	5.0	2.5	2.5	5.0	5.0	2.4	2.4
12	5.0	5.0	4.9	5.0	5.0	4.9	4.9
13	2.5	2.5	2.4	2.5	2.5	2.4	2.4
14	2.5	2.5	2.4	2.5	2.5	2.4	2.4
15	0	0	0	0	0	0	0
16	-	-	-	-	-	-	-
17	-	2.6	2.5	2.4	2.4	2.5	2.5
18	-	2.4	-	2.5	2.5	-	-
19	-	-	-	-	-	-	-
20	5.0	5.0	4.9	5.0	5.0	4.9	4.9
21	2.5	2.5	2.4	2.4	2.4	2.4	2.4
22	2.5	2.5	2.5	2.5	2.5	2.5	2.5
23	2.5	2.5	2.4	2.4	2.4	2.4	2.4
24	2.5	2.5	2.4	2.5	2.5	2.4	2.4
25	2.5	2.5	2.4	2.5	2.5	2.4	2.4
26	2.4	3.5	2.4	2.4	2.4	2.4	2.4
27	2.5	3.0	2.4	2.5	2.5	2.4	2.4
28	0.9	2.3	0.9	0.9	0.9	0.9	0.9
29	2.8	2.2	2.5	2.8	2.8	2.5	2.5
30	0	0	0	0	0	0	0

IC603 (LM358S) MAIN "B" (SERVO) C.B.A

PIN NO	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
1	6.1	6.2	6.1	6.2	6.2	6.1	6.1
2	4.9	2.4	2.3	4.9	4.9	2.3	2.3
3	2.9	2.4	2.4	2.9	2.9	2.4	2.4
4	4.4	2.5	2.4	4.4	4.4	2.4	2.4
5	0	0	0	0	0.	0	0
6	4.1	2.5	2.4	2.5	2.5	2.4	2.4
7	2.5	2.5	2.4	2.4	2.4	2.4	2.4
8	4.5	3.4	3.4	3.4	3.4	3.5	3.4
9	6.1	6.2	6.1	6.2	6.2	6.1	6.1

IC604 (BU4070B) SYSCON/SERVO PART

PIN NO	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
1	2.7	2.6	2.5	2.7	2.7	2.7	2.7
2	5.1	5.1	5.0	5.1	5.1	5.0	5.0
3	2.7	2.7	2.6	2.7	2.7	2.7	2.7
4	2.8	2.7	2.6	2.7	2.7	2.7	2.7
5	2.7	2.7	2.6	2.7	2.7	2.7	2.7
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	4.5	4.5	4.5	0	4.5	0	4.5
10	5.1	5.1	5.0	0	5.1	0	5.0
11	0	0	0	0	0	0	0
12	5.1	5.1	5.0	5.1	5.1	5.0	5.0
13	4.9	5.0	4.9	4.9	4.9	4.9	4.9
14	5.1	5.1	5.0	5.1	5.1	5.0	5.0

TR MAIN "B" (SERVO) C.B.A

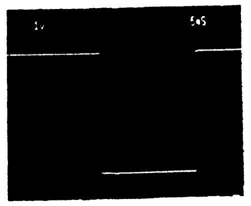
MODE	STOP			REC			PLAY			REW			F. FWD.			REV. S			FWD.S		
TR NO.	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
Q 602	5.0	4.9	0	3.0	2.4	1.6	3.0	2.4	1.3	5.0	5.0	0	5.0	5.0	0	3.0	2.4	1.3	3.0	2.4	1.3
Q 603	0.2	0.9	3.0	0.3	0.9	3.0	0.2	0.9	3.0	0.3	0.9	3.0	0.3	0.9	3.0	0.3	0.9	3.0	0.3	0.9	3.0
Q 605	2.5	4.7	2.7	2.5	4.7	2.4	2.5	4.7	2.5	2.5	4.7	2.5	2.5	4.7	2.5	2.5	4.7	2.5	2.5	4.7	2.5
Q 607	4.7	5.0	4.5	3.4	3.9	3.4	3.4	4.0	3.4	3.4	0.6	3.4	0	0.6	3.4	3.5	0.6	3.5	3.5	0.6	3.4
Q 608	4.5	5.0	2.5	3.4	5.0	2.5	3.4	5.0	0	3.4	5.0	0	3.4	5.0	0	3.5	5.0	0	3.4	5.0	0
Q 609	5.0	5.0	4.8	5.0	0	4.7	5.0	5.0	4.7	5.0	5.0	4.7	5.0	5.0	4.7	5.0	5.0	4.7	5.0	5.0	4.7
Q 610	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0
Q 611	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	5.0	0	5.0	0	5.0
Q 612	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0
Q 613	5.0	5.0	3.2	5.0	5.0	2.8	5.0	5.0	2.8	5.0	5.0	2.8	5.0	5.0	2.8	5.0	5.0	3.0	5.0	5.0	2.8
Q 614	4.4	2.2	4.4	4.4	0	4.4	4.4	0	4.4	4.9	4.9	0	4.4	0	4.4	4.9	4.9	0	4.4	0	4.4
Q 615	0	4.4	0	4.4	4.4	4.0	4.4	4.4	4.0	0	0	2.5	4.4	4.4	4.0	0	0	2.8	4.4	4.4	4.0
Q 616	0	0	3.3	0	0	3.5	0	0	3.4	0	0	3.4	0	3.7	0	0	3.7	0	0	0	3.4
Q 617	0	0.6	0	0	0.6	0	0	0.6	0	0	0.6	0	0	0.6	0	0	0.6	0	0	0.6	0
Q 618	0	3.8	0	0	0	3.2	0	0	3.2	0	0	3.3	0	0	3.2	0	0	3.3	0	0	3.2
Q 620	0	0	0	0	0.3	0	0	0.3	0	0	0.4	0	0	0.4	0	0	0.4	0	0	0.4	0
Q 622	0	0	0.7	0	0	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7
Q 623	0	0	0.7	0	0	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7
Q 624	1.4	2.0	3.6	1.4	2.0	3.6	1.4	2.0	3.6	1.4	2.0	3.6	1.4	2.0	3.6	1.4	2.0	3.6	2.4	2.0	3.6
Q 630	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0.3	0	0	0.3

TR MAIN "B" (SYSCON) C.B.A

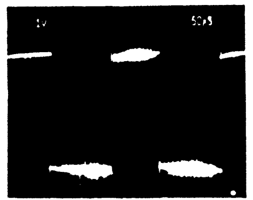
MODE	STOP			REC			PLAY			REW			F. FWD			REV. S			FWD.S		
TR NO.	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
Q 505	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0
Q 506	0.1	0.1	3.7	0	4.5	0	0	0.1	3.7	0	0.1	3.7	0	0.1	0	0	0.1	3.7	0	0.1	3.7
Q 507	0	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5
Q 508	0	3.5	0	0	3.5	0	0	3.5	0	0	3.5	0	0	3.5	0	0	3.5	0	0	3.5	0

IC602(UPD6161CA-607) SYSCON/SERVO PART

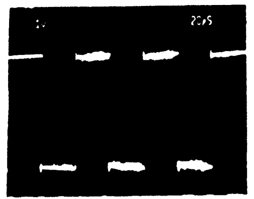
PIN NO	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
1	5.0	5.0	4.9	5.0	5.0	4.9	4.9
2	0	5.0	4.9	5.0	5.0	4.9	4.9
3	0	0	0	0	0	0.1	0.1
4	2.5	5.1	5.0	5.1	5.1	5.0	5.0
5	2.5	2.6	2.5	2.6	2.6	2.5	2.5
6	0	0	0	0	0	0	0
7	2.4	2.4	2.4	2.4	2.4	2.4	2.4
8	0	-	-	0	0	-	-
9	2.5	2.6	2.6	2.6	2.6	2.6	2.6
10	2.9	2.6	2.6	2.5	2.5	2.5	2.5
11	2.4	2.6	2.6	2.7	2.7	2.7	2.7
12	2.5	2.5	2.5	2.5	2.5	2.5	2.5
13	5.1	5.1	5.0	5.1	5.1	5.0	5.0
14	0	0	0	0	0	0	0
15	2.5	2.5	2.5	2.5	2.5	2.5	2.5
16	0	5.1	5.0	5.1	5.1	5.0	5.0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
19	5.0	5.0	5.0	5.0	5.0	5.0	5.0
20	2.3	0	0	5.0	0	5.0	0
21	4.9	2.5	2.4	4.9	4.9	2.4	2.4
22	0.6	0.6	0.6	0.6	0.6	0.6	0.6
23	5.0	5.0	5.0	5.0	5.0	5.0	5.0
24	5.0	5.0	5.0	5.0	5.0	5.0	5.0
25	5.1	2.5	2.6	5.1	5.1	2.6	2.6
26	0	0	0	0	0	0	0
27	0	2.6	2.4	0	0	2.4	2.4
28	0.4	0.2	4.9	0.4	0.4	4.9	4.9



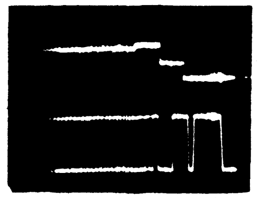
*TP603
5Vp-p
SW 25 Hz



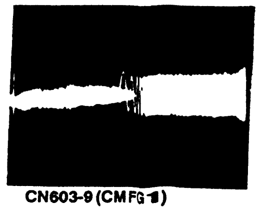
IC601-10
5Vp-p
REC/PB



IC601-17
5Vp-p
REC/PB



CH1. TP601 (Current Limit)
0.5v (10ms/div)
CH2. IC602-9 (FG1 IN)
2V (10ms/div)



CN603-9 (CM FG 1)
5mv (10ms/div)

TR MAIN "B" (SERVO) C.B.A

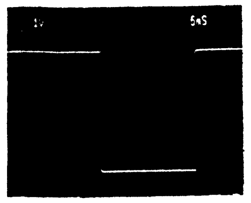
MODE	STOP			REC			PLAY			REW			F. FWD.			REV. S			FWD.S		
TR NO.	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
Q 602	5.0	4.9	0	3.0	2.4	1.6	3.0	2.4	1.3	5.0	5.0	0	5.0	5.0	0	3.0	2.4	1.3	3.0	2.4	1.3
Q 603	0.2	0.9	3.0	0.3	0.9	3.0	0.2	0.9	3.0	0.3	0.9	3.0	0.3	0.9	3.0	0.3	0.9	3.0	0.3	0.9	3.0
Q 605	2.5	4.7	2.7	2.5	4.7	2.4	2.5	4.7	2.5	2.5	4.7	2.5	2.5	4.7	2.5	2.5	4.7	2.5	2.5	4.7	2.5
Q 607	4.7	5.0	4.5	3.4	3.9	3.4	3.4	4.0	3.4	3.4	0.6	3.4	0	0.6	3.4	3.5	0.6	3.5	3.5	0.6	3.4
Q 608	4.5	5.0	2.5	3.4	5.0	2.5	3.4	5.0	0	3.4	5.0	0	3.4	5.0	0	3.5	5.0	0	3.4	5.0	0
Q 609	5.0	5.0	4.8	5.0	0	4.7	5.0	5.0	4.7	5.0	5.0	4.7	5.0	5.0	4.7	5.0	5.0	4.7	5.0	5.0	4.7
Q 610	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0
Q 611	5.0	0	5.0	5.0	0	5.0	5.0	0	5.0	5.0	0	6.0	5.0	0	5.0	5.0	5.0	0	5.0	0	5.0
Q 612	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0
Q 613	5.0	5.0	3.2	5.0	5.0	2.8	5.0	5.0	2.8	5.0	5.0	2.8	5.0	5.0	2.8	5.0	5.0	3.0	5.0	5.0	2.8
Q 614	4.4	2.2	4.4	4.4	0	4.4	4.4	0	4.4	4.9	4.9	0	4.4	0	4.4	4.9	4.9	0	4.4	0	4.4
Q 615	0	4.4	0	4.4	4.4	4.0	4.4	4.4	4.0	0	0	2.5	4.4	4.4	4.0	0	0	2.8	4.4	4.4	4.0
Q 616	0	0	3.3	0	0	3.5	0	0	3.4	0	0	3.4	0	3.7	0	0	3.7	0	0	0	3.4
Q 617	0	0.6	0	0	0.6	0	0	0.6	0	0	0.6	0	0	0.6	0	0	0.6	0	0	0.6	0
Q 618	0	3.8	0	0	0	3.2	0	0	3.2	0	0	3.3	0	0	3.2	0	0	3.3	0	0	3.2
Q 620	0	0	0	0	0.3	0	0	0.3	0	0	0.4	0	0	0.4	0	0	0.4	0	0	0.4	0
Q 622	0	0	0.7	0	0	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7
Q 623	0	0	0.7	0	0	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7	0	0.1	0.7
Q 624	1.4	2.0	3.6	1.4	2.0	3.6	1.4	2.0	3.6	1.4	2.0	3.6	1.4	2.0	3.6	1.4	2.0	3.6	2.4	2.0	3.6
Q 630	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0.3	0	0	0.3

TR MAIN "B" (SYSCON) C.B.A

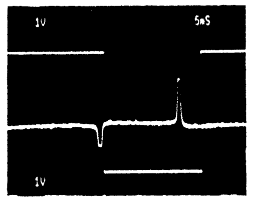
MODE	STOP			REC			PLAY			REW			F. FWD			REV. S			FWD.S		
TR NO.	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
Q 505	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0	4.8	4.6	0
Q 506	0.1	0.1	3.7	0	4.5	0	0	0.1	3.7	0	0.1	3.7	0	0.1	0	0	0.1	3.7	0	0.1	3.7
Q 507	0	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5
Q 508	0	3.5	0	0	3.5	0	0	3.5	0	0	3.5	0	0	3.5	0	0	3.5	0	0	3.5	0

IC602(UPD6161CA-607) SYSCON/SERVO PART

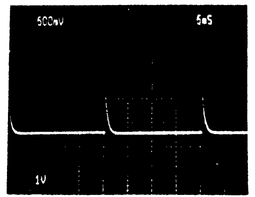
PIN NO	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
1	5.0	5.0	4.9	5.0	5.0	4.9	4.9
2	0	5.0	4.9	5.0	5.0	4.9	4.9
3	0	0	0	0	0	0.1	0.1
4	2.5	5.1	5.0	5.1	5.1	5.0	5.0
5	2.5	2.6	2.5	2.6	2.6	2.5	2.5
6	0	0	0	0	0	0	0
7	2.4	2.4	2.4	2.4	2.4	2.4	2.4
8	0	-	-	0	0	-	-
9	2.5	2.6	2.6	2.6	2.6	2.6	2.6
10	2.9	2.6	2.6	2.5	2.5	2.5	2.5
11	2.4	2.6	2.6	2.7	2.7	2.7	2.7
12	2.5	2.5	2.5	2.5	2.5	2.5	2.5
13	5.1	5.1	5.0	5.1	5.1	5.0	5.0
14	0	0	0	0	0	0	0
15	2.5	2.5	2.5	2.5	2.5	2.5	2.5
16	0	5.1	5.0	5.1	5.1	5.0	5.0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
19	5.0	5.0	5.0	5.0	5.0	5.0	5.0
20	2.3	0	0	5.0	0	5.0	0
21	4.9	2.5	2.4	4.9	4.9	2.4	2.4
22	0.6	0.6	0.6	0.6	0.6	0.6	0.6
23	5.0	5.0	5.0	5.0	5.0	5.0	5.0
24	5.0	5.0	5.0	5.0	5.0	5.0	5.0
25	5.1	2.5	2.6	5.1	5.1	2.6	2.6
26	0	0	0	0	0	0	0
27	0	2.6	2.4	0	0	2.4	2.4
28	0.4	0.2	4.9	0.4	0.4	4.9	4.9



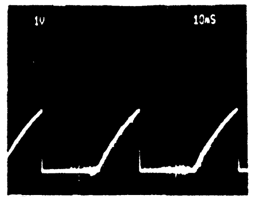
*TP603
5Vp-p
SW 25 Hz



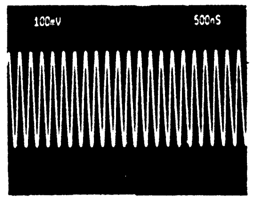
*TP604
2.8Vp-p
CTL PULSE



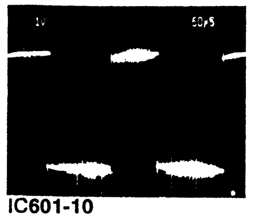
IC601-1
0.9Vp-p
REC



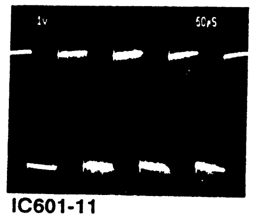
IC601-2
2.4Vp-p
REC/PB



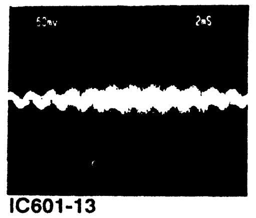
IC601-6
400mVp-p
REC/PB



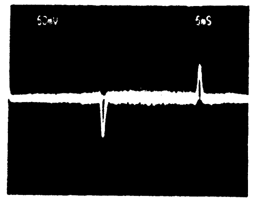
IC601-10
5Vp-p
REC/PB



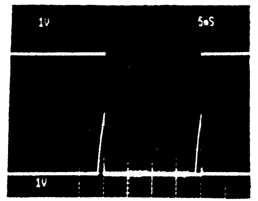
IC601-11
5Vp-p
REC/PB



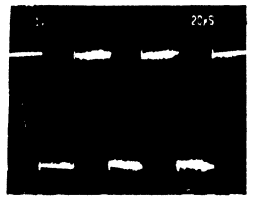
IC601-13
30mVp-p
REC/PB



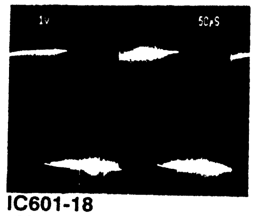
IC601-14
150mVp-p
REC/PB



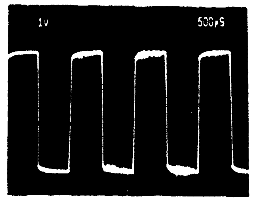
IC601-16
2.3Vp-p
REC/PB



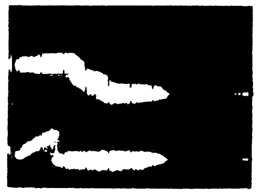
IC601-17
5Vp-p
REC/PB



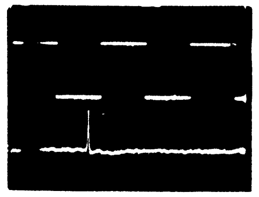
IC601-18
5Vp-p
REC/PB



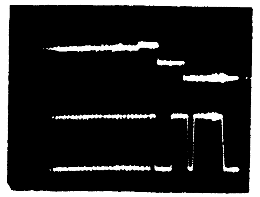
IC601-22
5Vp-p
REC/PB



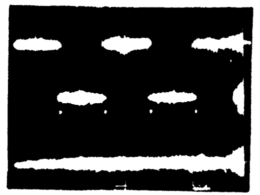
CH1.TP601 (Current Limit)
0.5V (10ms/div)
CH2.IC602-6(Slow Tracing)
1V (10ms/div)



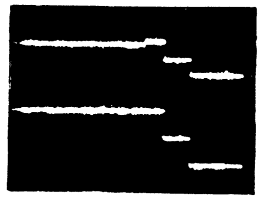
CH1. TP603 (H'SW)
2V (10ms/div)
CH2. IC602-7 (CTL Pulse)
(10ms/div)



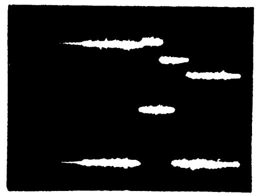
CH1. TP601 (Current Limit)
0.5v (10ms/div)
CH2. IC602-9 (FG1 IN)
2V (10ms/div)



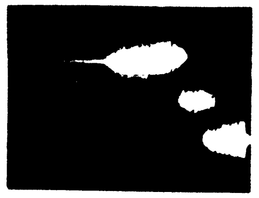
CH1. TP603 (H'SW)
2V (10ms/div)
CH2. IC602-18 (Guasi.V)
2V (10ms/div)



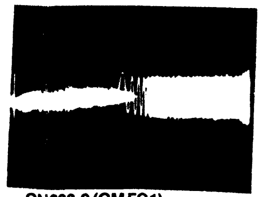
CH1. TP601 (Current Limit)
0.5v (10ms/div)
CH2. IC602-19 (Drive Limit)
2V (10ms/div)



CH1. TP601 (Current Limit)
0.5V (10ms/div)
CH2. IC602-20 (R/S/F)
2V (10ms/div)

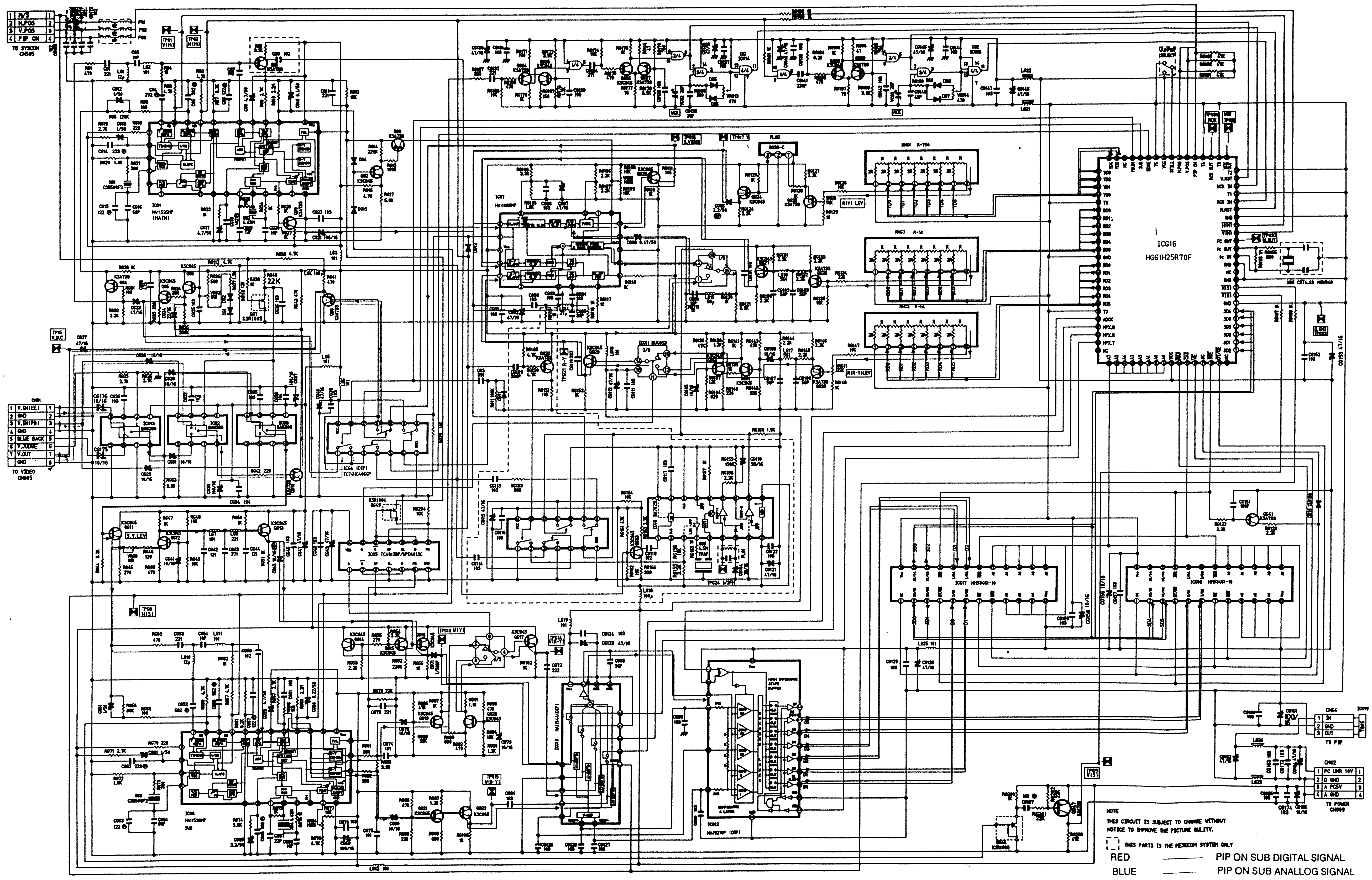


TP601 (Current Limit)
0.2V (10ms/div)



CN603-9 (CM FG1)
5mv (10ms/div)

10-3. PIP



NOTE

THIS CIRCUIT IS SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE THE PICTURE QULITY.

THIS PARTS IS THE MESECOM SYSTEM ONLY

RED ———— PIP ON SUB DIGITAL SIGNAL

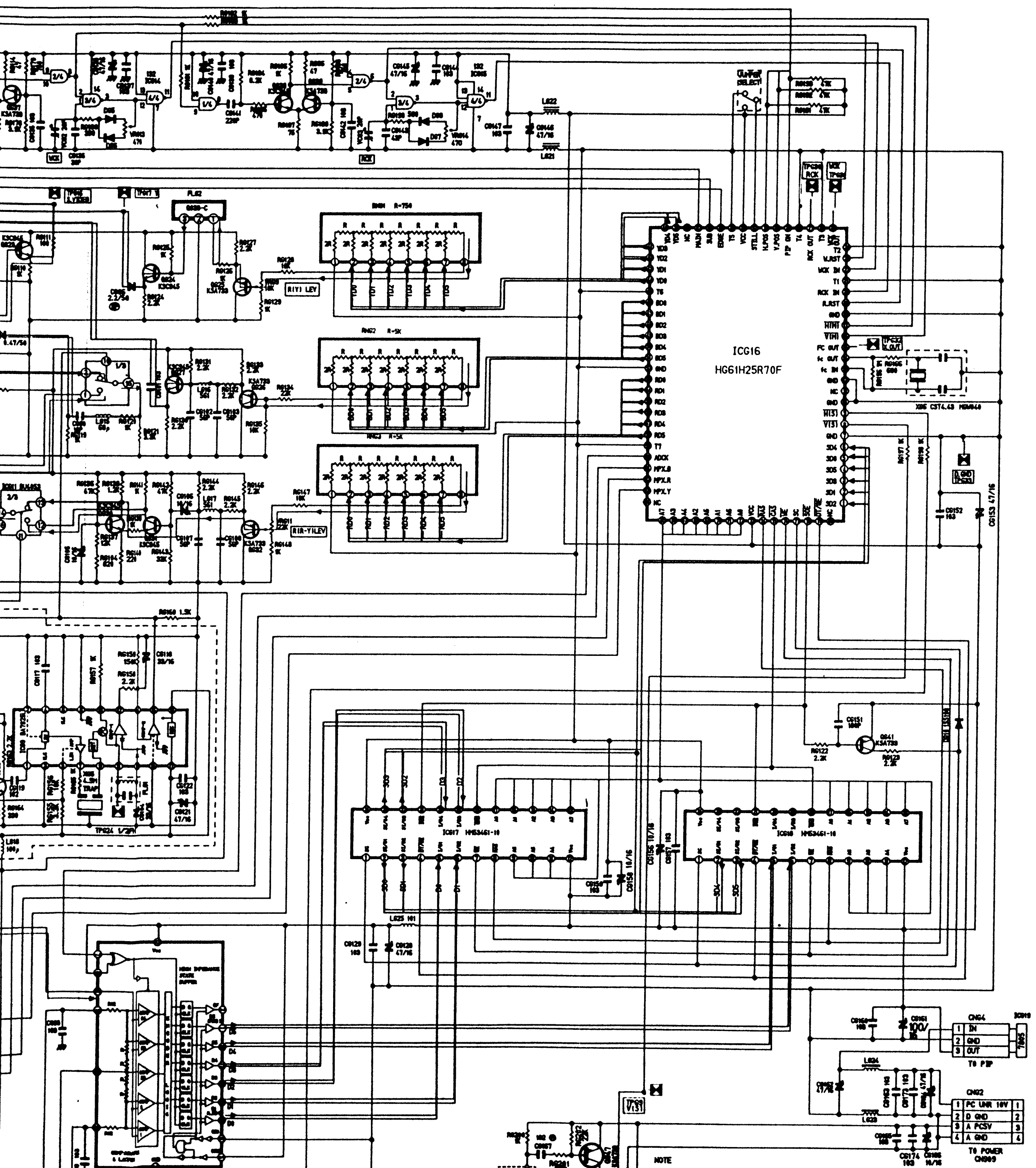
BLUE ———— PIP ON SUB ANALLOG SIGNAL

GREEN .... PIP ON/OFF MAIN SIGNAL

MODE	PIP OFF	
TR NO.	E	B
QG1	0.6	0
QG2	2.6	1.9
QG3	4.8	4.6
QG4	0.7	0
QG5	2.6	3.3
QG6	3.3	3.5
QG7	0	4.2
QG8	3.3	2.6
QG9	1.7	1.1
QG10	3.2	2.6
QG11	1.8	2.5
QG12	1.7	2.3
QG13	2.6	3.2
QG14	1.9	2.2
QG15	2.5	2.5
QG16	1.9	2.5
QG17	3.3	3.9
QG19	1.3	1.9
QG20	0.7	1.3
QG21	0.8	1.4
QG22	2.7	3.4
QG23	2.5	3.0
QG24	2.2	2.8
QG25	0.8	0.1
QG26	1.4	0.8
QG27	2.5	3.1
QG28	4.8	4.8
QG29	3.2	3.9
QG30	0.4	1.0
QG31	1.3	1.9
QG32	1.8	1.1
QG33	0.2	0.8
QG34	4.3	3.6
QG35	0.5	1.2
QG36	0.6	1.3
QG37	4.9	4.2
QG38	0.6	1.3
QG39	4.8	4.3
QG41	5	5
QG46	0	0.2
QG47	5	4.4

SPECIAL NOTE
All integrated circuits and many o
devices are electrostatically sensit
quire the special handling techniq
the "electrostatically sensitive (ES
this service manual.

NOTE
Do not use the part number show
ordering. The correct part numbe
list. And may be slightly different
drawing was prepared.



NOTE
THIS CIRCUIT IS SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE THE PICTURE QULITY.

THIS PARTS IS THE MESECOM SYSTEM ONLY

RED ——— PIP ON SUB DIGITAL SIGNAL
BLUE - - - - PIP ON SUB ANALLOG SIGNAL
GREEN PIP ON/OFF MAIN SIGNAL

MODE	PIP OFF			PIP ON		
TR NO.	E	B	C	E	B	C
QG1	0.6	0	0	0.6	0	0
QG2	2.6	1.9	4.7	2.6	1.9	4.7
QG3	4.8	4.6	2.5	4.8	4.6	2.5
QG4	0.7	0	0	0.7	0	0
QG5	2.6	3.3	4.8	2.6	3.2	4.8
QG6	3.3	3.5	4.8	3.2	3.4	4.8
QG7	0	4.2	0	0	4.2	0
QG8	3.3	2.6	0	3.2	2.5	0
QG9	1.7	1.1	0	1.8	1.1	0
QG10	3.2	2.6	0	3.2	2.6	0
QG11	1.8	2.5	4.8	1.8	2.5	4.8
QG12	1.7	2.3	3.2	1.7	2.3	3.3
QG13	2.6	3.2	4.8	2.6	3.3	4.8
QG14	1.9	2.2	4.8	1.9	2.2	4.8
QG15	2.5	2.5	4.8	2.5	2.5	4.8
QG16	1.9	2.5	4.8	1.9	2.5	4.8
QG17	3.3	3.9	4.7	3.3	3.9	4.8
QG19	1.3	1.9	3.9	1.2	1.9	4.0
QG20	0.7	1.3	4.0	0.7	1.3	4.0
QG21	0.8	1.4	3.4	0.8	1.4	3.4
QG22	2.7	3.4	4.8	2.7	3.4	4.8
QG23	2.5	3.0	4.8	2.4	3.0	4.8
QG24	2.2	2.8	4.8	2.2	2.9	4.8
QG25	0.8	0.1	0	0.9	0.2	0
QG26	1.4	0.8	0	1.7	1.0	0
QG27	2.5	3.1	4.8	2.5	3.1	4.8
QG28	4.8	4.8	0.4	4.8	4.8	0.4
QG29	3.2	3.9	4.8	3.2	3.9	4.8
QG30	0.4	1.0	3.9	0.4	1.0	3.9
QG31	1.3	1.9	3.9	1.2	1.9	3.9
QG32	1.8	1.1	0	1.7	1.0	0
QG33	0.2	0.8	3.5	0.2	0.8	3.5
QG34	4.3	3.6	4.2	4.2	3.5	4.1
QG35	0.5	1.2	4.3	0.5	1.2	4.2
QG36	0.6	1.3	0.7	0.6	1.3	0.7
QG37	4.9	4.2	0.6	4.9	4.2	0.6
QG38	0.6	1.3	0.7	0.6	1.3	0.7
QG39	4.8	4.3	0.6	4.8	4.2	0.6
QG41	5	5	0	5	5	-
QG46	0	0.2	4.6	0	0.2	4.6
QG47	5	4.4	0.2	5	4.4	0.2

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

MODE	ICG1	
PIN NO.	PIP OFF	PIP ON
1	2.4	2.4
2	1.9	1.9
3	4.8	4.8
4	0.3	0.3
5	3.7	3.7
6	0.2	0.2
7	1.0	1.0
8	2.0	2.0
9	0.6	0.6
10	2.3	2.3
11	2.0	2.0
12	2.6	2.6
13	0	0
14	1.8	1.8
15	0	0
16	2.2	2.2
17	2.5	2.5
18	0	0
19	0.2	0.2
20	2.3	2.3
21	2.7	2.7
22	2.3	2.3
23	2.0	2.0
24	2.7	2.7
25	2.7	2.7
26	1.2	1.2
27	3.7	3.7
28	2.5	2.5

MODE	ICG5	
PIN NO.	PIP OFF	PIP ON
1	2.4	2.4
2	2.4	2.4
3	0.3	0.3
4	0	0
5	2.4	2.4
6	0.4	0.4
7	0	0
8	0.3	0.2
9	2.4	2.4
10	0	0
11	0.3	0.3
12	2.4	2.4
13	2.4	2.4
14	4.8	4.8

MODE	ICG2	
PIN NO.	PIP OFF	PIP ON
1	4.9	4.9
2	0	0
3	2.5	2.4
4	2.5	2.5
5	0	0
6	2.5	2.5
7	0	0
8	2.6	2.6

MODE	ICG3	
PIN NO.	PIP OFF	PIP ON
1	4.9	4.9
2	0	0
3	2.5	2.4
4	2.5	2.5
5	0	0
6	2.5	2.5
7	0	0
8	2.5	2.5

MODE	ICG4	
PIN NO.	PIP OFF	PIP ON
1	2.7	2.5
2	2.7	2.5
3	2.7	2.5
4	2.6	2.5
5	0	0
6	0	0.5
7	0	0
8	0.3	0.9
9	4.9	4.9
10	2.5	2.3
11	2.7	2.5
12	0	0.4
13	5	4.5
14	4.9	4.9

PIP

MODE	ICG6	
PIN NO.	PIP OFF	PIP ON
1	2.4	2.4
2	1.8	1.9
3	4.8	4.8
4	0.3	0.3
5	3.7	3.7
6	0.2	0.2
7	0.9	1.0
8	2.0	2.0
9	0.6	0.6
10	2.3	2.3
11	2.0	2.0
12	2.6	2.6
13	0	0
14	0	0
15	0	0
16	0.3	0.3
17	2.5	2.5
18	0	0
19	0.3	0.3
20	0	0
21	2.9	2.8
22	2.4	2.3
23	2.0	2.0
24	2.7	2.7
25	2.8	2.7
26	1.4	1.3
27	3.8	3.7
28	2.5	2.4

MODE	ICG7	
PIN NO.	PIP OFF	PIP ON
1	2.3	2.3
2	2.5	2.5
3	1.7	1.7
4	4.8	4.8
5	2.8	2.8
6	4.6	4.5
7	2.8	2.8
8	0	0
9	0.3	0.9
10	3.8	3.8
11	1.7	1.7
12	3.8	3.8
13	0	0
14	2.2	2.2
15	2.6	2.5
16	2	2
17	2.4	2.4
18	3.1	3.0

MODE	ICG8	
PIN NO.	PIP OFF	PIP ON
1	0	0
2	4.6	4.6
3	0	0
4	0	0
5	4.9	4.9
6	0	0
7	0	0
8	0	0
9	1.8	1.8
10	0	0
11	4.9	4.9
12	0	0
13	0.4	0.4
14	4.9	4.9

MODE	ICG9	
PIN NO.	PIP OFF	PIP ON
1	3.5	3.5
2	0	0
3	0	0
4	3.5	3.5
5	4.6	4.6
6	0	0
7	4.4	4.3
8	0	0
9	3	3
10	0	0
11	3.5	3.5
12	0	0
13	3.5	3.5
14	0	0
15	0	0
16	0	0
17	4.9	4.9
18	4.9	4.9

MODE	ICG10	
PIN NO.	PIP OFF	PIP ON
1	4.9	4.9
2	2.4	2.4
3	0	0.9
4	0	0
5	5	3.7
6	0	0.2
7	0.3	0.3
8	0	0
9	2.5	2.4
10	2.5	2.4
11	2.4	2.4
12	0	0
13	2.3	2.2
14	1.9	1.9
15	2.9	2.9
16	0	0

MODE	ICG11	
PIN NO.	PIP OFF	PIP ON
1	0	0
2	2.2	2.2
3	4	4
4	4	4
5	4	4
6	0	0
7	0	0
8	0	0
9	2.4	2.4
10	0	0
11	2.4	2.4
12	4	4
13	4	3.9
14	4	3.9
15	2	2
16	4.9	4.9

MODE	ICG12	
PIN NO.	PIP OFF	PIP ON
1	4.1	3.5
2	4.1	0.6
3	0	0
4	0	0
5	5	5
6	0	0
7	0	0.3
8	5	4.9
9	2.9	2.9
10	1.9	1.9
11	2.4	2.4
12	5	4.9
13	4.1	1.9
14	4.1	1.2
15	4.1	1.3
16	2.5	2.4
17	4.1	1.0
18	4.1	1.0

MODE	ICG13	
PIN NO.	PIP OFF	PIP ON
1	4.9	4.9
2	0.2	0.2
3	2.5	2.4
4	2.5	2.5
5	0	0
6	2.5	2.5
7	0	0
8	2.6	2.6

PIP

MODE	ICG14	
PIN NO.	PIP OFF	PIP ON
1	2.4	2.6
2	5	4.9
3	2.8	2.7
4	5	5
5	4.1	4.1
6	0.1	0
7	0	0
8	5	4.9
9	5	5
10	0.7	0.7
11	2.9	2.9
12	2.8	2.7
13	5	5
14	5	5

MODE	ICG15	
PIN NO.	PIP OFF	PIP ON
1	2.5	2.6
2	5	4.9
3	2.7	2.7
4	5	5
5	0.7	0.7
6	5	4.9
7	0	0
8	4.8	4.7
9	0.3	0.3
10	5	5
11	2	2
12	2.7	2.7
13	5	5
14	5	5

MODE	ICG19	
PIN NO.	PIP OFF	PIP ON
1	12.0	0
2	0	0
3	5.0	5.0

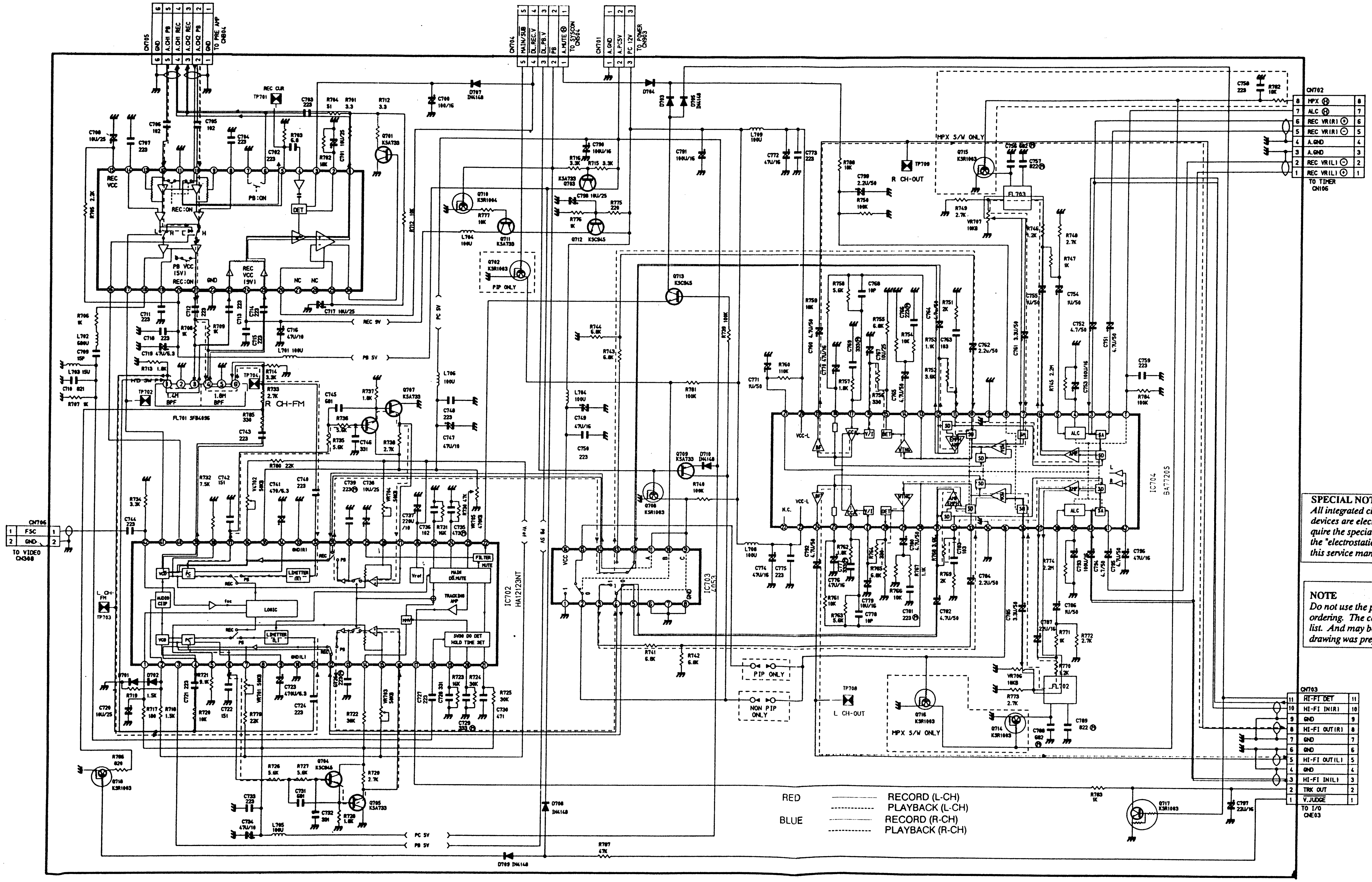
MODE	ICG17	
PIN NO.	PIP OFF	PIP ON
1	0	0
2	-	-
3	-	-
4	5.0	5.0
5	-	-
6	-	-
7	5.0	5.0
8	2.5	2.4
9	2.5	2.4
10	2.5	2.4
11	2.5	2.4
12	5.0	5.0
13	2.5	2.4
14	2.5	2.4
15	2.5	2.4
16	2.5	2.4
17	2.5	2.4
18	5.0	4.3
19	-	-
20	-	-
21	5.0	4.6
22	-	-
23	-	-
24	0	0

MODE	ICG18	
PIN NO.	PIP OFF	PIP ON
1	0	0
2	-	-
3	-	-
4	5.0	5.0
5	-	-
6	-	-
7	5.0	3.9
8	2.5	2.4
9	2.5	2.4
10	2.5	2.4
11	2.5	2.4
12	5.0	5.0
13	2.5	2.4
14	2.5	2.4
15	2.5	2.4
16	2.5	2.4
17	2.5	2.4
18	5.0	4.3
19	-	-
20	-	-
21	5.0	4.6
22	-	-
23	-	-
24	0	0

PIP

MODE	ICG16	
PIN NO.	PIP OFF	PIP ON
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	0	0
8	0	0
9	0.3	0.3
10	0	0
11	0	0
12	0	0
13	2.4	2.4
14	2.4	2.4
15	4.9	4.7
16	0.2	0.2
17	0.3	0.3
18	0	0
19	5.0	4.9
20	2.1	2.2
21	0	0
22	2.5	2.3
23	5.0	4.9
24	0	0
25	2.0	2.0
26	0	0
27	1.7	1.7
28	0	0
29	0.2	4.7
31	4.8	4.7
31	4.8	4.7
32	0	0
33	5.0	5.0
34	0	0
35	0	0
36	0	-
37	5.0	4.5
38	0	0
39	0	-
40	0	-
41	0	-
43	0	-
44	0	-
45	0	0
46	0	-
47	0	-
48	0	-
49	0	-
50	0	-
51	0	-
52	0	0
53	0	-
54	0	-
55	0	-
53	0	-
54	0	-
56	0	-
57	0	-
58	0	-
59	0	0
60	0	0.3
61	0	0.2
62	5.0	3.7
63	0	1.0
64	0	0
65	2.5	2.4
66	2.5	2.4
67	2.5	2.4
68	2.5	2.4
69	2.5	2.4
70	2.5	2.4
71	2.5	2.4
72	2.5	2.4
73	5.0	5.0
74	2.5	2.4
75	5.0	4.3
76	5.0	3.9
77	0	0.2
78	5.0	4.6
79	5.0	5.0
80	0	0

10-4. Hi-Fi Audio


CN705
GND
A.CH1 PB
A.CH1 REC
A.CH2 REC
A.CH2 PB
GND
TO PRE AMP CN804
CN704
MAIN/SUB
DL.REC.V
DL.PB.V
PB
A.MUTE ⊕
TO SYSCON CN504
CN701
A.GND
A.PCSV
PC 12V
TO POWER CN903
REC CUR
TP701
R CH-FM
FL701 SFB4096
CN706
FSC
GND
TO VIDEO CN300
L CH-FM
TP703
IC702
HA12123NT
IC703
4053
IC704
BA7720S
PIP ONLY
NON PIP ONLY
MPX S/W ONLY
R CH-OUT
TP709
L CH-OUT
TP708
FL703
FL702
CN702
MPX ⊕
ALC ⊕
REC VR(R) ⊕
REC VR(R) ⊖
A.GND
A.GND
REC VR(L) ⊖
REC VR(L) ⊕
TO TIMER CN106
CN703
HI-FI DET
HI-FI IN(R)
GND
HI-FI OUT(R)
GND
GND
HI-FI OUT(L)
GND
HI-FI IN(L)
TRK OUT
V.JUDGE
TO I/O CNE03
PC 5V
PB 5V
REC 9V
RED
BLUE
RECORD (L-CH)
PLAYBACK (L-CH)
RECORD (R-CH)
PLAYBACK (R-CH)

SPECIAL NOTE

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE

Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

IC MAIN "C"(HI-FI)

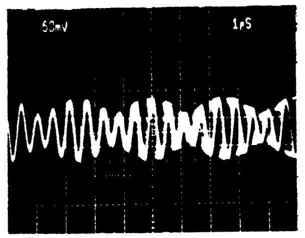
IC LOC.NO	PIN NO.	REC	PLAY
IC 701	1	4.6	0.4
IC 701	2	1.0	0
IC 701	3	0	3.3
IC 701	4	4.5	0
IC 701	5	0	0
IC 701	6	0	0
IC 701	7	0	0
IC 701	8	0	1.7
IC 701	9	0	0.7
IC 701	10	0	0.6
IC 701	11	0	0
IC 701	12	0	0.6
IC 701	13	0	0.7
IC 701	14	0	1.7
IC 701	15	0	4.9
IC 701	16	0	0.6
IC 701	17	0	2.4
IC 701	18	0.3	2.9
IC 701	19	0	2.4
IC 701	20	0	5.0
IC 701	21	0	2.9
IC 701	22	0	0
IC 701	23	3.7	0
IC 701	24	8.9	0
IC 701	25	3.7	0
IC 701	26	0	3.8
IC 701	27	0	0
IC 701	28	0	0
IC 701	29	4.5	0.3
IC 701	30	4.0	0
IC 702	1	1.2	1.2
IC 702	2	1.0	1.0
IC 702	3	0	5.0
IC 702	4	3.4	0
IC 702	5	0.6	0.7
IC 702	6	2.2	2.6
IC 702	7	2.5	2.5
IC 702	8	5.0	5.0
IC 702	9	1.2	1.3
IC 702	10	0	0
IC 702	11	0	1.8
IC 702	12	2.5	2.3
IC 702	13	5.0	1.7
IC 702	14	5.0	4.3
IC 702	15	1.7	2.5
IC 702	16	2.2	2.5
IC 702	17	0	1.9
IC 702	18	0	1.8
IC 702	19	1.8	2.0
IC 702	20	1.2	4.1
IC 702	21	0	4.9
IC 702	22	4.2	0.4
IC 702	23	2.6	2.5
IC 702	24	1.2	1.2
IC 702	25	1.8	3.0
IC 702	26	2.5	2.5
IC 702	27	2.2	2.5
IC 702	28	1.7	2.5
IC 702	29	4.2	1.2
IC 702	30	5.0	1.7
IC 702	31	2.5	2.3
IC 702	32	0	1.8
IC 702	33	1.3	0
IC 702	34	5.0	1.4
IC 702	35	5.0	5.0
IC 702	36	2.5	2.5

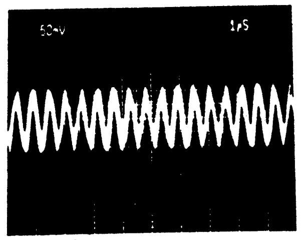
IC MAIN "C"(HI-FI)

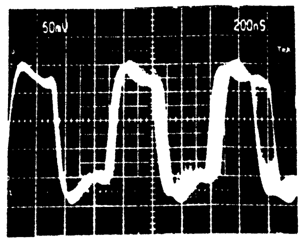
IC LOC.NO	PIN NO.	REC	PLAY
IC 702	37	2.2	2.6
IC 702	38	0.6	0.7
IC 702	39	3.6	0
IC 702	40	0	0.6
IC 702	41	0	2.4
IC 702	42	0.5	0.5
IC 703	1	0	0
IC 703	2	0.3	4.5
IC 703	3	0	2.3
IC 703	4	2.5	2.3
IC 703	5	2.5	2.3
IC 703	6	0	0
IC 703	7	0	0
IC 703	8	0	0
IC 703	9	0	11.8
IC 703	10	11.8	11.8
IC 703	11	0	11.8
IC 703	12	2.5	2.4
IC 703	13	0	2.3
IC 703	14	2.5	2.3
IC 703	15	0	0
IC 703	16	12.0	12.0
IC 704	1	0	0
IC 704	2	6.0	6.0
IC 704	3	6.0	6.0
IC 704	4	0.6	0.6
IC 704	5	5.7	5.7
IC 704	6	6.0	6.0
IC 704	7	6.0	6.0
IC 704	8	0	0
IC 704	9	0	0
IC 704	10	6.0	6.0
IC 704	11	6.0	6.0
IC 704	12	6.0	6.0
IC 704	13	6.0	6.0
IC 704	14	6.0	6.0
IC 704	15	0	0
IC 704	16	0	0
IC 704	17	6.0	6.0
IC 704	18	6.0	6.0
IC 704	19	6.0	6.0
IC 704	20	12.0	12.0
IC 704	21	0.9	0.9
IC 704	22	0	0
IC 704	23	12.0	12.0
IC 704	24	6.0	6.0
IC 704	25	6.0	6.0
IC 704	26	6.0	6.0
IC 704	27	0	0.7
IC 704	28	0	0.5
IC 704	29	6.0	6.0
IC 704	30	6.0	6.0
IC 704	31	6.0	6.0
IC 704	32	6.0	6.0
IC 704	33	6.0	6.0
IC 704	34	0	0
IC 704	35	0.2	4.5
IC 704	36	6.0	6.0
IC 704	37	6.0	6.0
IC 704	38	5.7	5.7
IC 704	39	0.6	0.6
IC 704	40	6.0	6.0
IC 704	41	6.0	6.0
IC 704	42	6.0	6.0

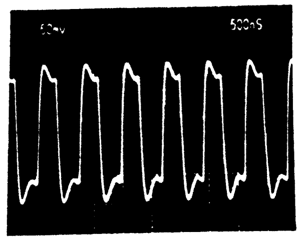
TR MAIN "C"(HI-FI)

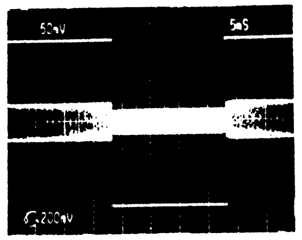
TR LOC.NO	PIN NO.	REC	PLAY
Q 701	E	4.5	0.3
	B	4.0	0
	C	0	0
Q 703	E	5.1	5.1
	B	5.1	4.3
	C	0	5.0
Q 704	E	1.6	2.5
	B	2.2	1.9
	C	5.0	0
Q 705	E	2.2	2.5
	B	1.6	1.9
	C	0	0
Q 706	E	1.6	1.9
	B	2.2	2.5
	C	5.0	5.0
Q 707	E	2.2	2.5
	B	1.6	1.8
	C	0	0
Q 709	E	4.7	4.5
	B	4.5	0.1
	C	0.2	4.5
Q 710	B	0	0
	B	5.0	0.2
	C	0	8.6
Q 711	B	0	9.4
	B	8.3	8.6
	C	8.9	0
Q 712	E	9.0	9.4
	B	9.8	9.8
	C	11.9	11.8
Q 713	E	0	0.4
	B	0	0.9
	C	4.2	0.4
Q 717	E	0	0
	B	0	3.2
	C	0	0
Q 718	B	0	0
	B	3.7	0.4
	C	0	0

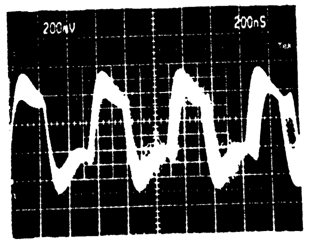

TP701
110mVp-p
REC AFM
F=1 KHz

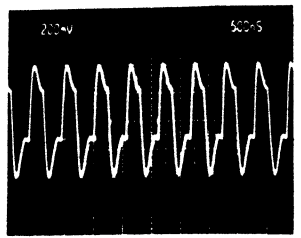

TP701
110mVp-p
REC AFM
F=0 Hz

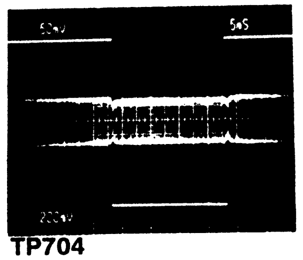

TP703
230mVp-p
L CH-FM
F=1 KHzl

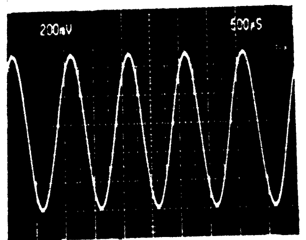

TP703
230mVp-p
L CH-FM
F=0Hz

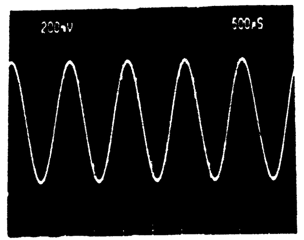

TP703
230mVp-p
PB

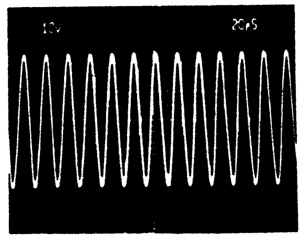

TP704
880mVp-p
R CH-FM
F=1 KHz


TP704
800mVp-p
R CH-FM
F=0Hz

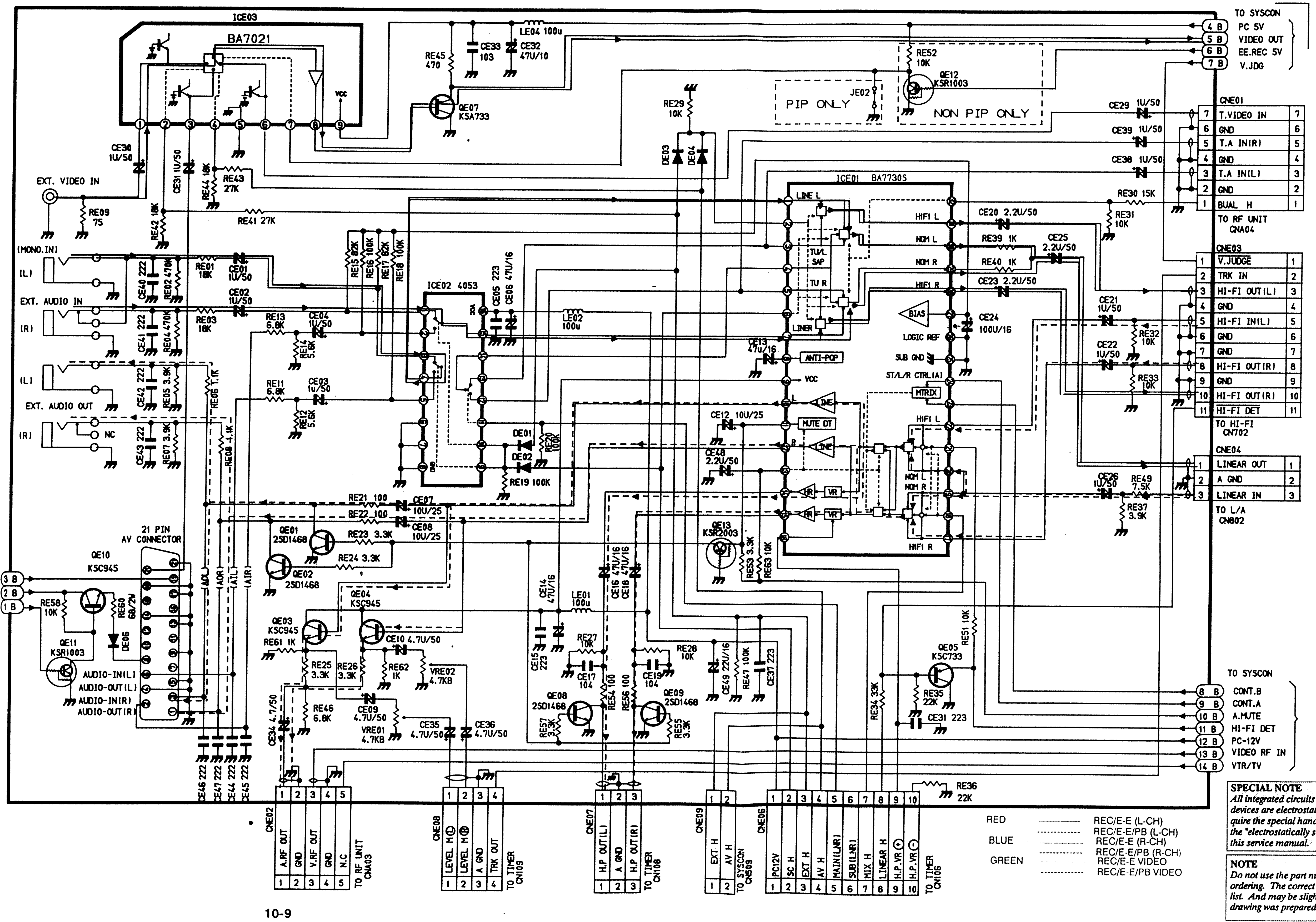

TP704
400mVp-p
PB


AUDIO OUT
1.1Vp-p
PB


AUDIO IN
800mVp-p
REC


CN803-1
45Vp-p
REC

10-5. Input Output Select


ICE03
BA7021
ICE01 BA7730S
ICE02 4053
QE07 KSA733
QE12 KSR1003
PIP ONLY
NON PIP ONLY
JE02
EXT. VIDEO IN
(MONO.IN)
EXT. AUDIO IN
EXT. AUDIO OUT
21 PIN AV CONNECTOR
QE10 KSC945
QE11 KSR1003
QE01 2SD1468
QE02 2SD1468
QE03 KSC945
QE04 KSC945
QE08 2SD1468
QE09 2SD1468
QE13 KSR2003
QE05 KSC733
TO VIDEO
VIDEO IN
PC 12V
DL.PB.V
AUDIO-IN(L)
AUDIO-OUT(L)
AUDIO-IN(R)
AUDIO-OUT(R)
TO SYSCON
PC 5V
VIDEO OUT
EE.REC 5V
V.JDG
CNE01
T.VIDEO IN
GND
T.A IN(R)
GND
T.A IN(L)
GND
BUAL H
TO RF UNIT CNA04
CNE03
V.JUDGE
TRK IN
HI-FI OUT(L)
GND
HI-FI IN(L)
GND
GND
HI-FI OUT(R)
GND
HI-FI OUT(R)
HI-FI DET
TO HI-FI CN702
CNE04
LINEAR OUT
A GND
LINEAR IN
TO L/A CN802
TO SYSCON
CONT.B
CONT.A
A.MUTE
HI-FI DET
PC-12V
VIDEO RF IN
VTR/TV
CNE02
A.RF OUT
GND
V.RF OUT
GND
N.C
TO RF UNIT CNA03
CNE08
LEVEL M(L)
LEVEL M(R)
A GND
TRK OUT
TO TIMER CN109
CNE07
H.P OUT(L)
A GND
H.P OUT(R)
TO TIMER CN108
CNE09
EXT H
AV H
TO SYSCON CN509
CNE06
PC12V
SC H
EXT H
AV H
MAIN(LNR)
SUB(LNR)
MIX H
LINEAR H
H.P.VR(+)
H.P.VR(-)
TO TIMER CN106
RE36 22K

RED	――――	REC/E-E (L-CH)
	------------	REC/E-E/PB (L-CH)
BLUE	――――	REC/E-E (R-CH)
	------------	REC/E-E/PB (R-CH)
GREEN	――――	REC/E-E VIDEO
	------------	REC/E-E/PB VIDEO

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
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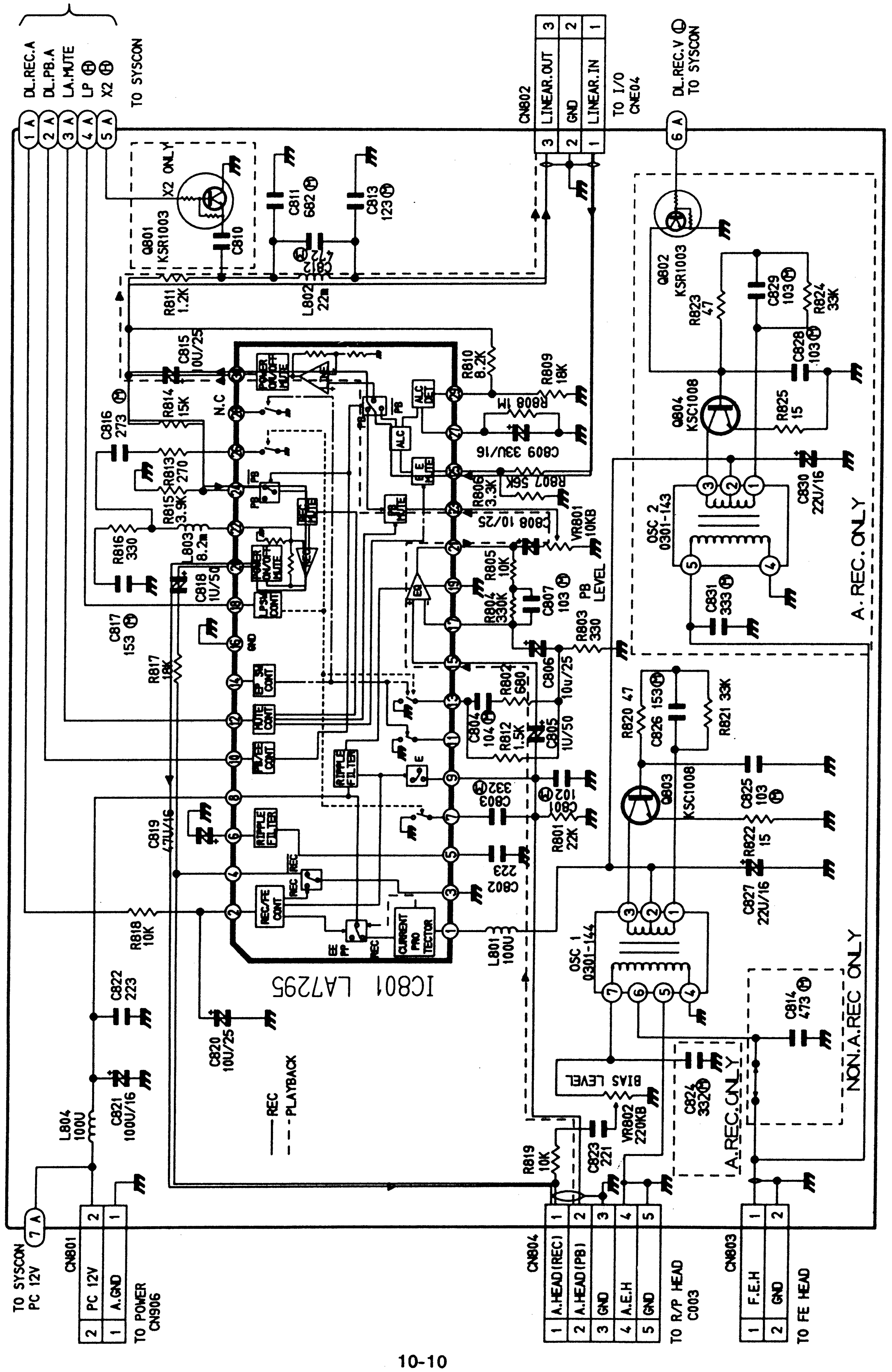
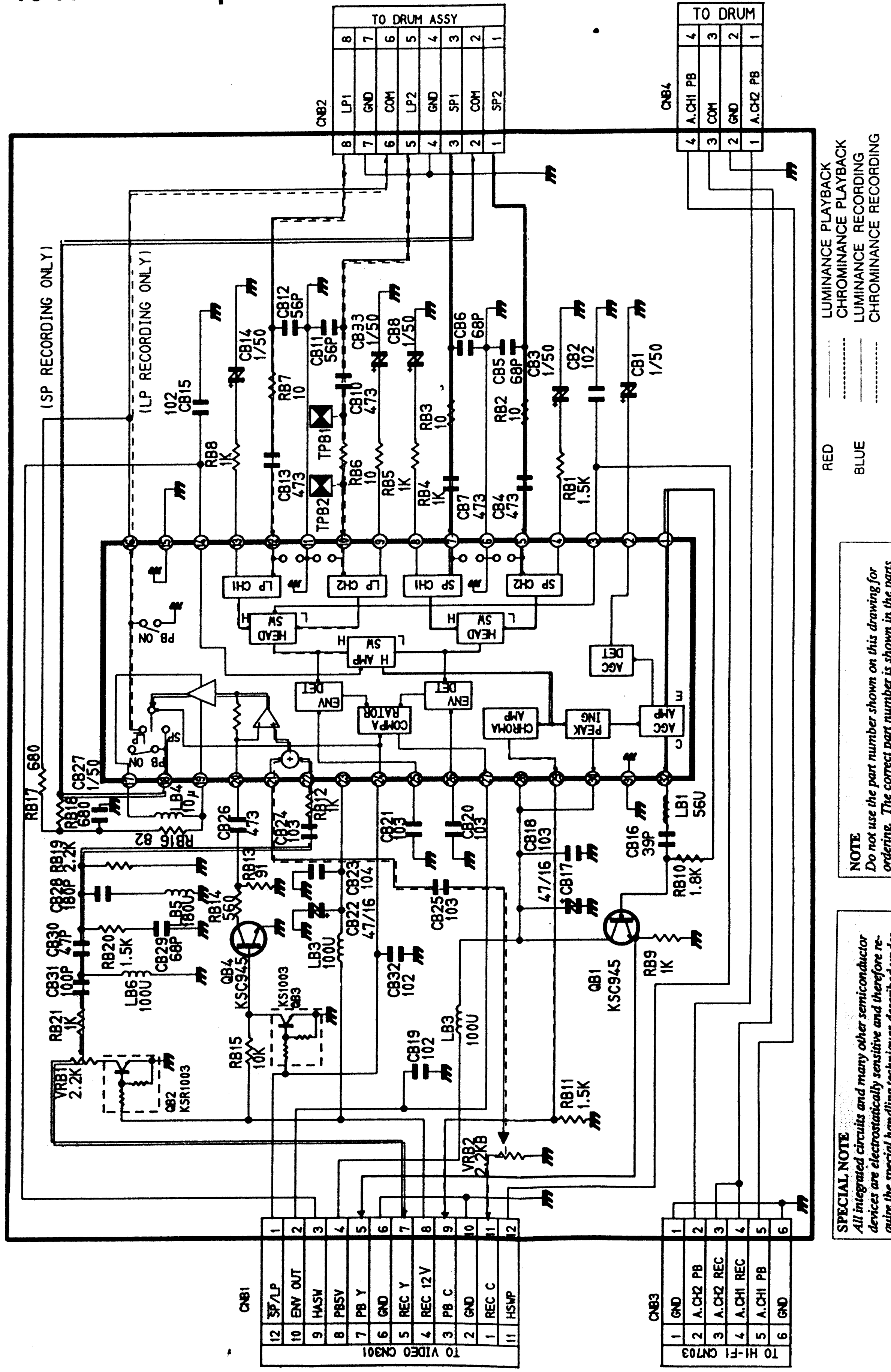
10-6. Liner Audio


DL.REC.A
DL.PB.A
LA.MUTE
LP (H)
X2 (H)
TO SYSCON
CN802
LINEAR.OUT
GND
LINEAR.IN
TO I/O CNE04
DL.REC.V (L)
TO SYSCON
Q801 KSR1003
X2 ONLY
Q802 KSR1003
Q803 KSC1008
Q804 KSC1008
OSC 2 0301-143
OSC 1 0301-144
IC801 LA7295
A. REC. ONLY
NON.A.REC ONLY
A.REC.ONLY
PB LEVEL
BIAS LEVEL
VR801 10KB
VR802 220KB
REC
PLAYBACK
TO SYSCON PC 12V
CN801
PC 12V
A.GND
TO POWER CN906
CN804
A.HEAD(REC)
A.HEAD(PB)
GND
A.E.H
GND
TO R/P HEAD C003
CN803
F.E.H
GND
TO FE HEAD

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

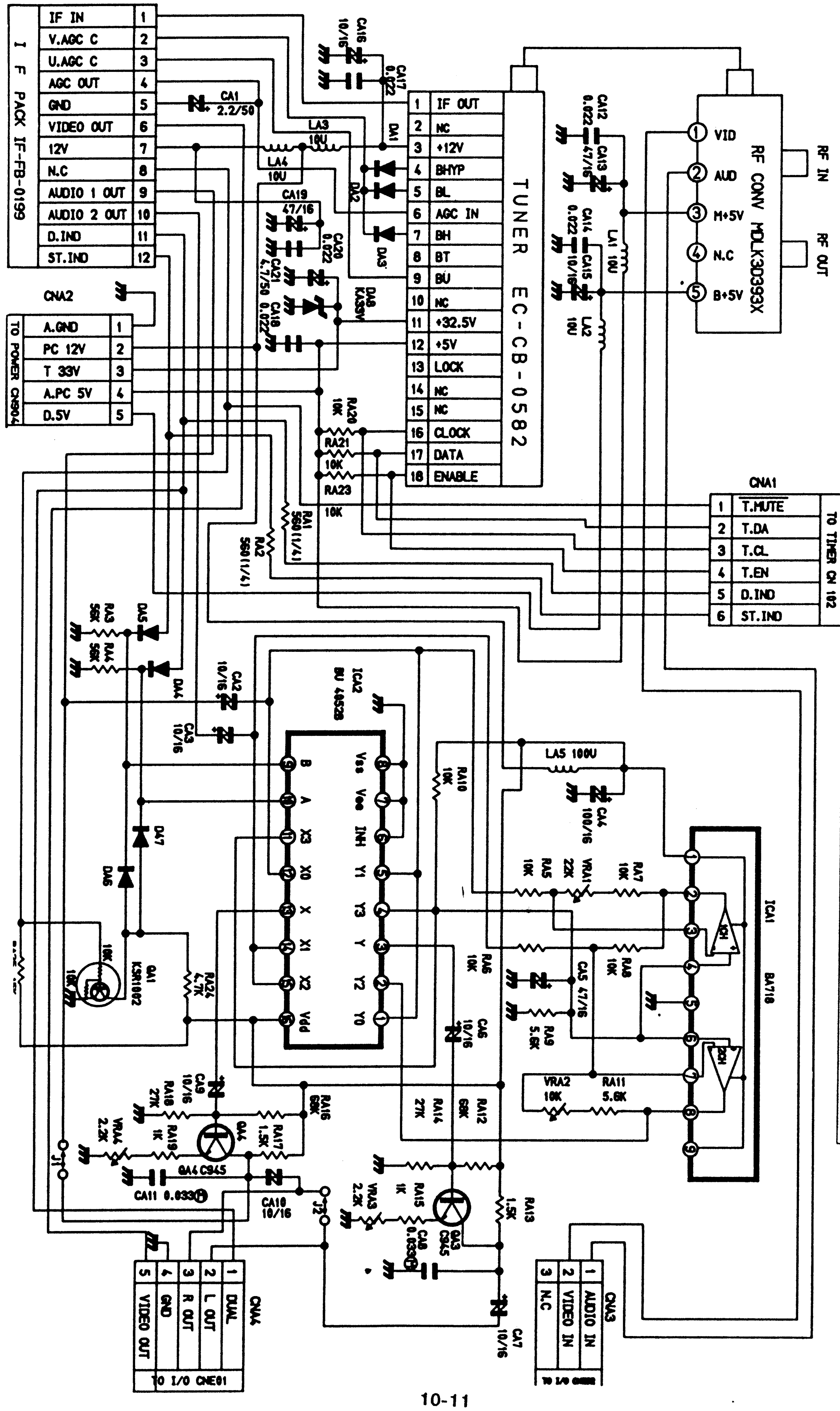
10-7. Pre Amp


TO DRUM ASSY
CNB2
LP1
GND
COM
LP2
GND
SP1
COM
SP2
TO DRUM
CNB4
A.CH1 PB
COM
GND
A.CH2 PB
(SP RECORDING ONLY)
(LP RECORDING ONLY)
LP CH1
LP CH2
SP CH1
SP CH2
HEAD SW
H AMP SW
AGC DET
ENV DET
COMPA RATOR
CHROMA AMP
PEAK ING
AGC AMP
PB ON
QB1 KSC945
QB2 KSR1003
QB3 KSR1003
QB4 KSC945
VRB1 2.2K
VRB2 2.2KB
CNB1
SF/LP
ENV OUT
HASW
PBSV
PB Y
GND
REC Y
REC 12V
PB C
GND
REC C
HSWP
TO VIDEO CN301
CNB3
GND
A.CH2 PB
A.CH2 REC
A.CH1 REC
A.CH1 PB
GND
TO HI-FI CN703
RED
BLUE
LUMINANCE PLAYBACK
CHROMINANCE PLAYBACK
LUMINANCE RECORDING
CHROMINANCE RECORDING

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

10-8. Tuner (VX-SERIES)


I F PACK IF-FB-0199
IF IN 1
V.AGC C 2
U.AGC C 3
AGC OUT 4
GND 5
VIDEO OUT 6
12V 7
N.C 8
AUDIO 1 OUT 9
AUDIO 2 OUT 10
D.IND 11
ST.IND 12
CNA2
TO POWER CN904
A.GND 1
PC 12V 2
T 33V 3
A.PC 5V 4
D.5V 5
TUNER EC-CB-0582
1 IF OUT
2 NC
3 +12V
4 BHYP
5 BL
6 AGC IN
7 BH
8 BT
9 BU
10 NC
11 +32.5V
12 +5V
13 LOCK
14 NC
15 NC
16 CLOCK
17 DATA
18 ENABLE
RF CONV MDLK3D393X
VID
AUD
M+5V
N.C
B+5V
RF IN
RF OUT
CNA1
TO TIMER CN 102
1 T.MUTE
2 T.DA
3 T.CL
4 T.EN
5 D.IND
6 ST.IND
ICA2 BU 4053B
ICA1 BA718
CNA4
1 DUAL
2 L OUT
3 R OUT
4 GND
5 VIDEO OUT
TO I/O CNE01
CNA3
1 AUDIO IN
2 VIDEO IN
3 N.C
TO I/O CNE02
CA1 2.2/50
LA3 10U
LA4 10U
CA19 47/16
CA20 0.022
CA21 4.7/50
CA18 0.022
DA1
DA2
DA3
DA8 KA33V
CA16 10/16
CA17 0.022
CA12 0.022
CA13 47/16
CA14 0.022
CA15 10/16
LA1 10U
LA2 10U
RA20 10K
RA21 10K
RA23 10K
RA1 560(1/4)
RA2 560(1/4)
RA3 56K
RA4 56K
DA5
DA4
CA2 10/16
CA3 10/16
DA7
DA6
QA1 KSR1002
RA24 4.7K
LA5 100U
CA4 100/16
RA10 10K
RA5 10K
VRA1 22K
RA7 10K
RA6 10K
RA8 10K
CA5 47/16
RA9 5.6K
CA6 10/16
VRA2 10K
RA11 5.6K
RA14 27K
RA12 68K
RA16 68K
RA18 27K
CA9 10/16
QA4 QA4 C945
VRA4 2.2K
RA19 1K
RA17 1.5K
CA11 0.033
CA10 10/16
VRA3 2.2K
RA15 1K
QA3 C945
CA8 0.033
RA13 1.5K
CA7 10/16
J1
J2

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
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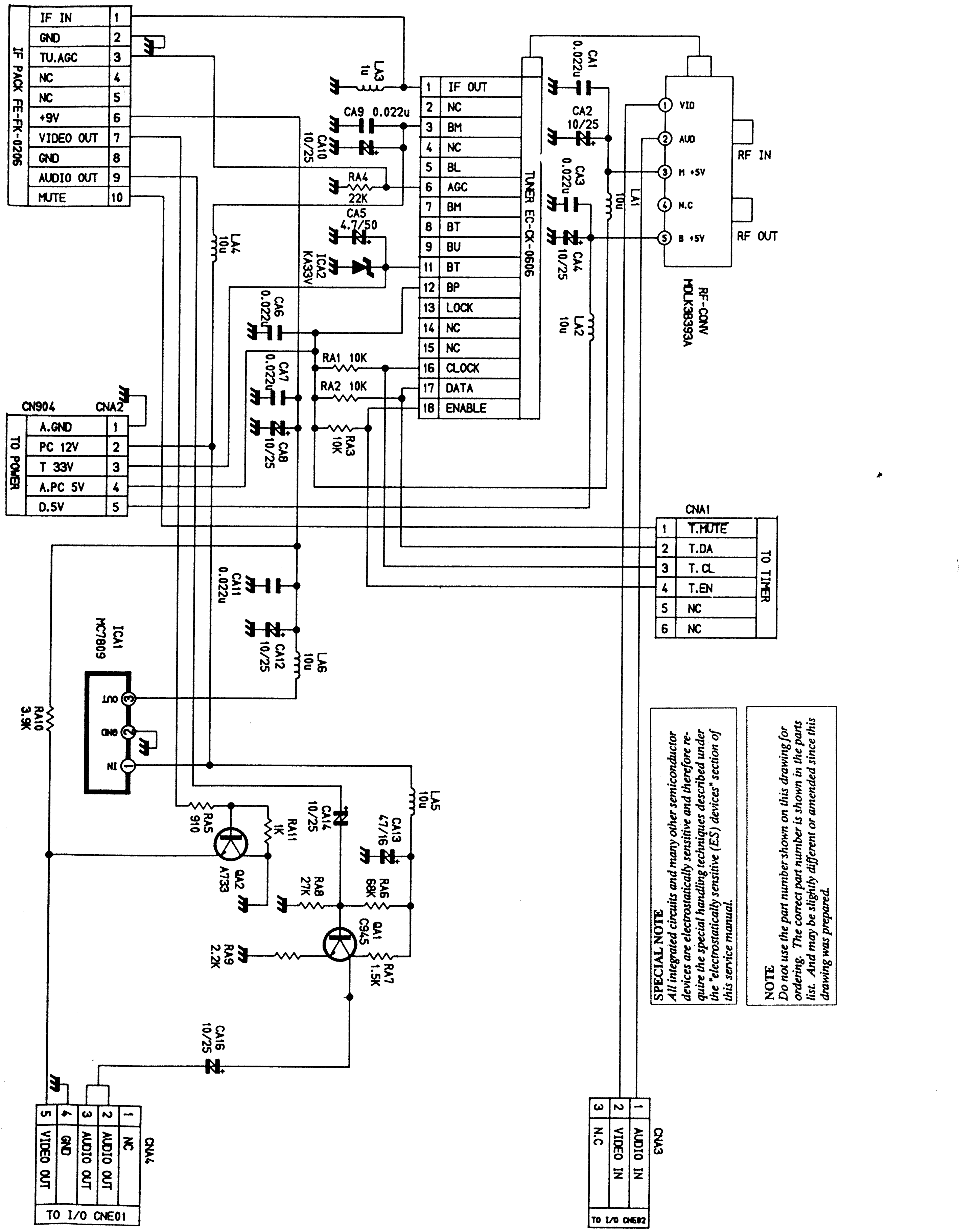
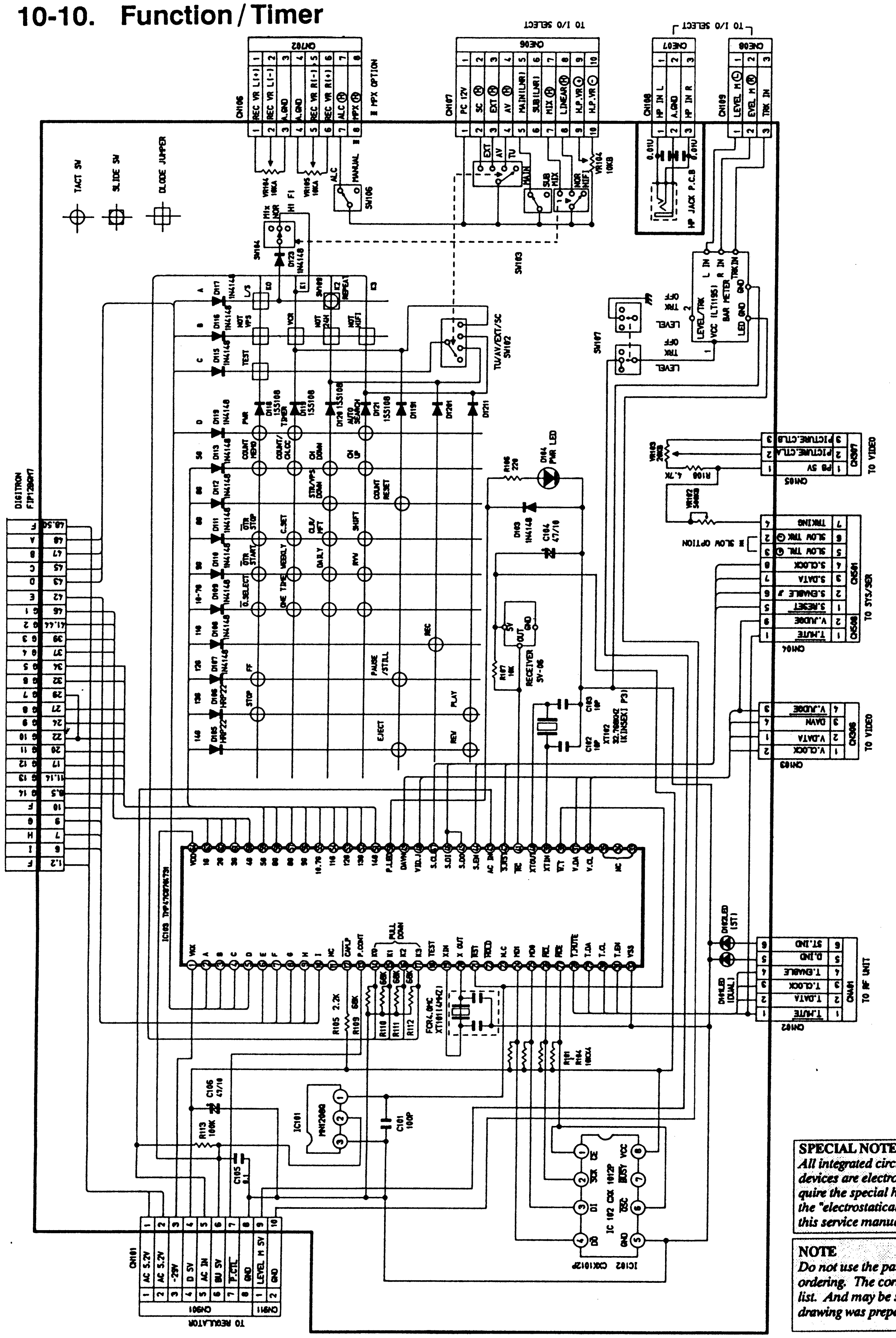
10-9. Tuner (VI-SERIES)


IF PACK FE-FK-0206
IF IN 1
GND 2
TU.AGC 3
NC 4
NC 5
+9V 6
VIDEO OUT 7
GND 8
AUDIO OUT 9
MUTE 10
CN904
CNA2
TO POWER
A.GND 1
PC 12V 2
T 33V 3
A.PC 5V 4
D.5V 5
TUNER EC-CK-0606
1 IF OUT
2 NC
3 BM
4 NC
5 BL
6 AGC
7 BM
8 BT
9 BU
11 BT
12 BP
13 LOCK
14 NC
15 NC
16 CLOCK
17 DATA
18 ENABLE
RF-CONV MDLK3B393A
VID
AUD
M +5V
N.C
B +5V
RF IN
RF OUT
CNA1
TO TIMER
1 T.MUTE
2 T.DA
3 T.CL
4 T.EN
5 NC
6 NC
LA3 1u
CA9 0.022u
CA10 10/25
RA4 22K
CA5 4.7/50
ICA2 KA33V
LA4 10u
CA6 0.022u
CA7 0.022u
CA8 10/25
RA1 10K
RA2 10K
RA3 10K
CA1 0.022u
CA2 10/25
CA3 0.022u
CA4 10/25
LA1 10u
LA2 10u
CA11 0.022u
CA12 10/25
LA6 10u
ICA1 MC7809
OUT
GND
IN
RA10 3.9K
RA5 910
RA11 1K
QA2 A733
CA14 10/25
CA13 47/16
LA5 10u
RA8 27K
RA6 68K
QA1 C945
RA9 2.2K
RA7 1.5K
CA16 10/25
CNA4
1 NC
2 AUDIO OUT
3 AUDIO OUT
4 GND
5 VIDEO OUT
TO I/O CNE01
CNA3
1 AUDIO IN
2 VIDEO IN
3 N.C
TO I/O CNE02

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

10-10. Function / Timer


TO I/O SELECT
TO I/O SELECT
TACT SW
SLIDE SW
DIODE JUMPER
DIGITRON FIP12BM7
HP JACK P.C.B
TO VIDEO
TO SYS/SER
TO VIDEO
TO RF UNIT
TO REGULATOR
IC101
IC 102 CXK1012P
SW106
SW103
SW102
SW107

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
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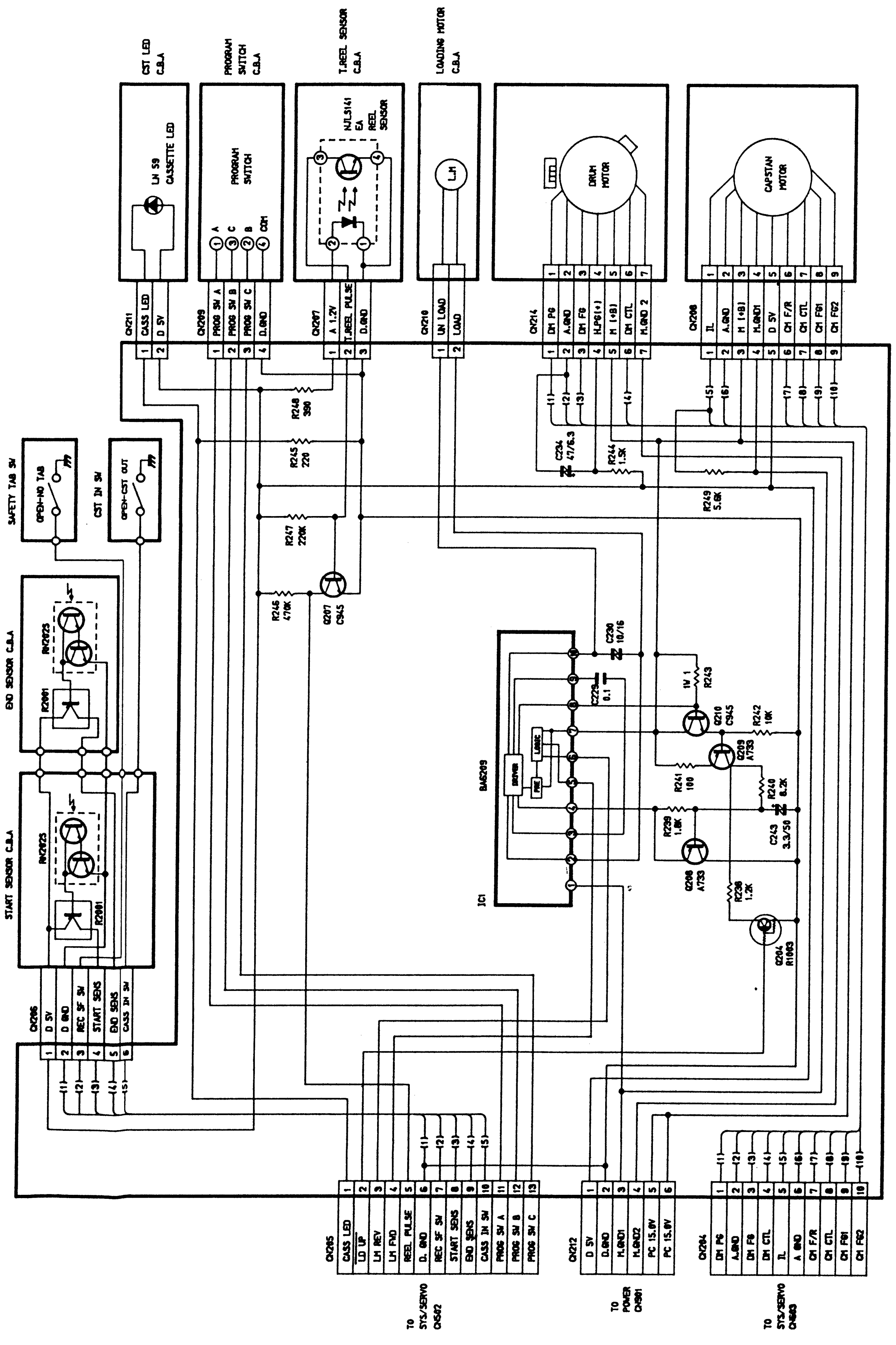
IC101 FUNC/TIMBR C.B.A			
PIN NO	STOP	PLAY	RBC
1	-29.8	-29.8	-29.8
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-
11	-	-	-
12	3.2	3.2	3.2
13	-0.5	-0.5	-0.5
14	0	0	0
15	1.5	1.5	1.5
16	0	0	0
17	1.5	1.5	1.5
18	0.2	0.2	0.2
19	2.3	2.3	2.3
20	2.4	2.4	2.4
21	-	-	-
22	0.2	0.2	0.2
23	0.2	0.2	0.2
24	5.0	5.0	5.0
25	0.0	0.0	0.0
26	5.0	5.0	5.0
27	5.0	5.0	5.0
28	-	-	-
29	3.9	3.9	3.9
30	-	-	-
31	-	-	-
32	0	0	0
33	0.2	0.2	0.2
34	0.2	0.2	0.2
35	0.2	0.2	0.2
36	5.0	5.0	5.0
37	5.0	5.0	5.0
38	5.1	5.1	5.1
39	2.3	2.3	2.3
40	2.6	2.6	2.6
41	5.0	5.0	5.0
42	4.4	4.4	4.4
43	3.0	3.0	3.0
44	-	-	-
45	-	-	-

IC101 FUNC/TIMBR C.B.A			
PIN NO	STOP	PLAY	RBC
46	4.6	4.6	4.6
47	4.7	4.7	4.7
48	3.9	3.9	3.9
49	4.3	4.3	4.3
50	4.3	4.3	4.3
51	-	-	-
52	-	-	-
53	-	-	-
54	-	-	-
55	-	-	-
56	-	-	-
57	-	-	-
58	-	-	-
59	-	-	-
60	-	-	-
61	-	-	-
62	-	-	-
63	-	-	-
64	-	-	-

IC102 FUNC/TIMBR C.B.A			
PIN NO	STOP	PLAY	RBC
1	5.0	5.0	5.0
2	5.0	5.0	5.0
3	0	0	0
4	5.0	5.0	5.0
5	0	0	0
6	5.0	5.0	5.0
7	-	-	-
8	5	5	5

IC103 FUNC/TIMBR C.B.A			
PIN NO	STOP	PLAY	RBC
1	5.1	5.1	5.1
2	5.1	5.1	5.1
3	0	0	0

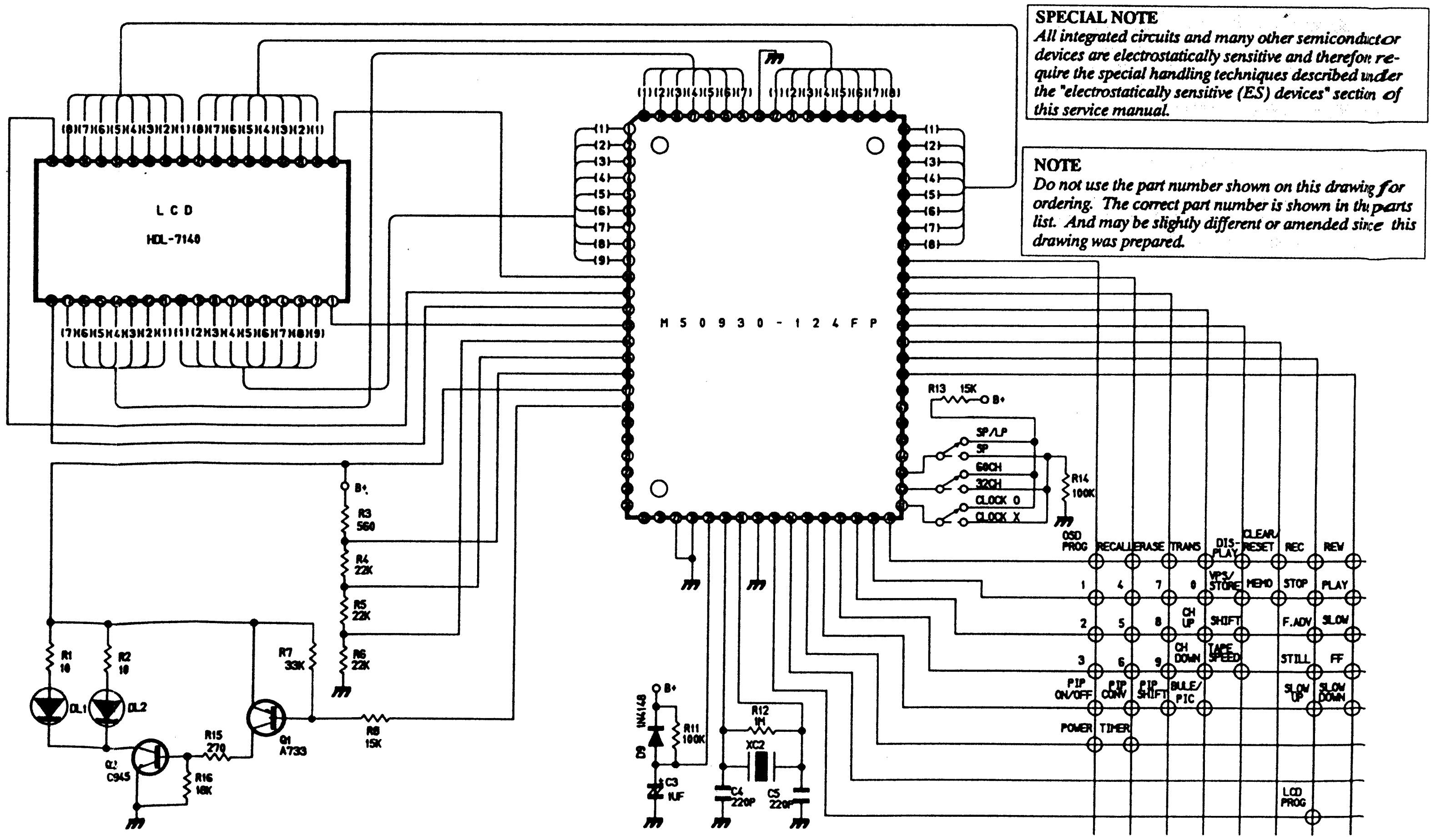
10-11. Deck Joint


CST LED C.B.A
PROGRAM SWITCH C.B.A
T.REEL SENSOR C.B.A
LOADING MOTOR C.B.A
LN 59 CASSETTE LED
PROGRAM SWITCH
NJL5141 EA REEL SENSOR
LM
DRUM MOTOR
CAPSTAN MOTOR
CN211 CASS LED D 5V
CN209 PROG SW A PROG SW B PROG SW C D.GND
CN207 A 1.2V T.REEL PULSE D.GND
CN210 LM LOAD LOAD
CN214 DM PG A.GND DM FG H.P(+) M (+B) DM CTL M.GND 2
CN208 IL A.GND M (+B) M.GND1 D 5V CM F/R CM CTL CM FG1 CM FG2
SAFETY TAB SW
OPEN-NO TAB
CST IN SW
OPEN-CST OUT
END SENSOR C.B.A
START SENSOR C.B.A
RH2923
R2001
R248 390
R245 220
R247 220K
R246 470K
Q207 C945
C234 47/6.3
R244 1.5K
R249 5.6K
C230 10/16
C229 0.1
1W 1 R243
Q210 C945
R242 10K
Q209 A733
R241 100
R240 8.2K
R239 1.8K
Q208 A733
C243 3.3/50
R238 1.2K
Q204 R1093
BA6209
IC1
CN206 D 5V D GND REC SF SW START SENS END SENS CASS IN SW
CN205 CASS LED LD UP LM REV LM FWD REEL PULSE D. GND REC SF SW START SENS END SENS CASS IN SW PROG SW A PROG SW B PROG SW C
TO SYS/SERVO CN542
CN212 D 5V D.GND M.GND1 M.GND2 PC 15.8V PC 15.8V
TO POWER CN901
CN204 DM PG A.GND DM FG DM CTL IL A GND CM F/R CM CTL CM FG1 CM FG2
TO SYS/SERVO CN603

TR DBCK/JOINT C.B.A																					
MODE	STOP			REC			PLAY			RE			F. FWD			REV. S			FWD.S		
TR NO.	B	B	C	B	B	C	B	B	C	B	B	C	B	B	C	B	B	C	B	B	C
Q 204	0	0	15	0	3.5	0	0	3.5	10	0	0	15	0	10	15	0	3.5	9.5	0	3.5	9.5
Q 207	0	0.1	4.8	-	-	0	0	-	-	0	0.3	1.3	0	0.3	1.3	0	-	-	0	-	-
Q 208	15	15	0	0.5	0.5	0	0.5	0.5	0	15		0	15		0	0.5	0.5	0	0.5	0.5	0
Q 209	15	14.4	15	15	15	0.5	15	15	0.5	15	14	15	15	14	15	15	14	0.5	15	14	0.5
Q 210	14.4	15	14	14	15	15	14	15	15	14	15	15	14	15	15	14	15	15	14	15	15

IC1 DBCK/JOINT C.B.A							
PIN NO	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
1	-3.4	0	0	0	0	0	0
2	0.5	0.6	0.5	0.5	0.5	0.6	0.6
3	0.9	0.9	0.9	0.9	0.9	0.9	0.9
4	15	0.5	0.5	15	15	0.9	0.9
5	2.8	2.9	2.8	2.8	1.2	2.9	2.9
6	2.8	2.8	2.8	2.8	2.8	2.9	2.9
7	15	15	15	15	15	15	15
8	15	15	15	15	15	15	15
9	0.9	0.9	1.0	0.9	0.9	1.0	1.0
10	0.5	0.6	0.6	0.5	0.5	0.6	0.6

10-12. Remote Control


LCD
HDL-7140
M50930-124FP
R13 15K B+
SP/LP
SP
60CH
32CH
CLOCK 0
CLOCK X
R14 100K
OSD PROG
RECALL
ERASE
TRANS
DIS-PLAY
CLEAR/RESET
REC
REW
VPS/STORE
MEMO
STOP
PLAY
CH UP
SHIFT
F.ADV
SLOW
CH DOWN
TAPE SPEED
STILL
FF
PIP ON/OFF
PIP CONV
PIP SHIFT
BULE/PIC
SLOW UP
SLOW DOWN
POWER
TIMER
LCD PROG
B+
R3 560
R4 22K
R5 22K
R6 22K
R1 10
R2 10
DL1
DL2
R7 33K
Q1 A733
R8 15K
Q2 C945
R15 270
R16 10K
1N4148
D9
R11 100K
C3 1UF
R12 1M
XC2
C4 220P
C5 220P

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NOTE
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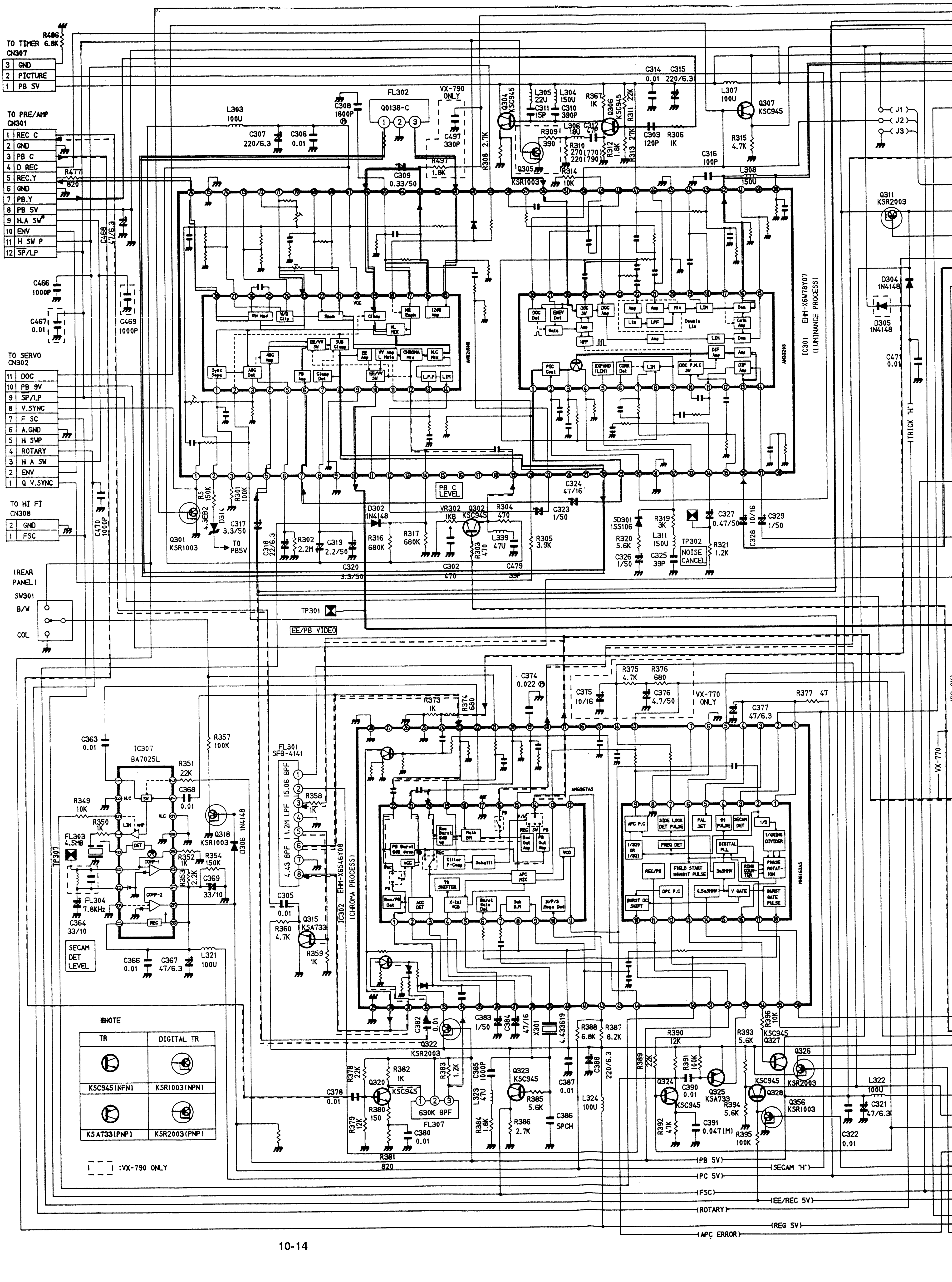
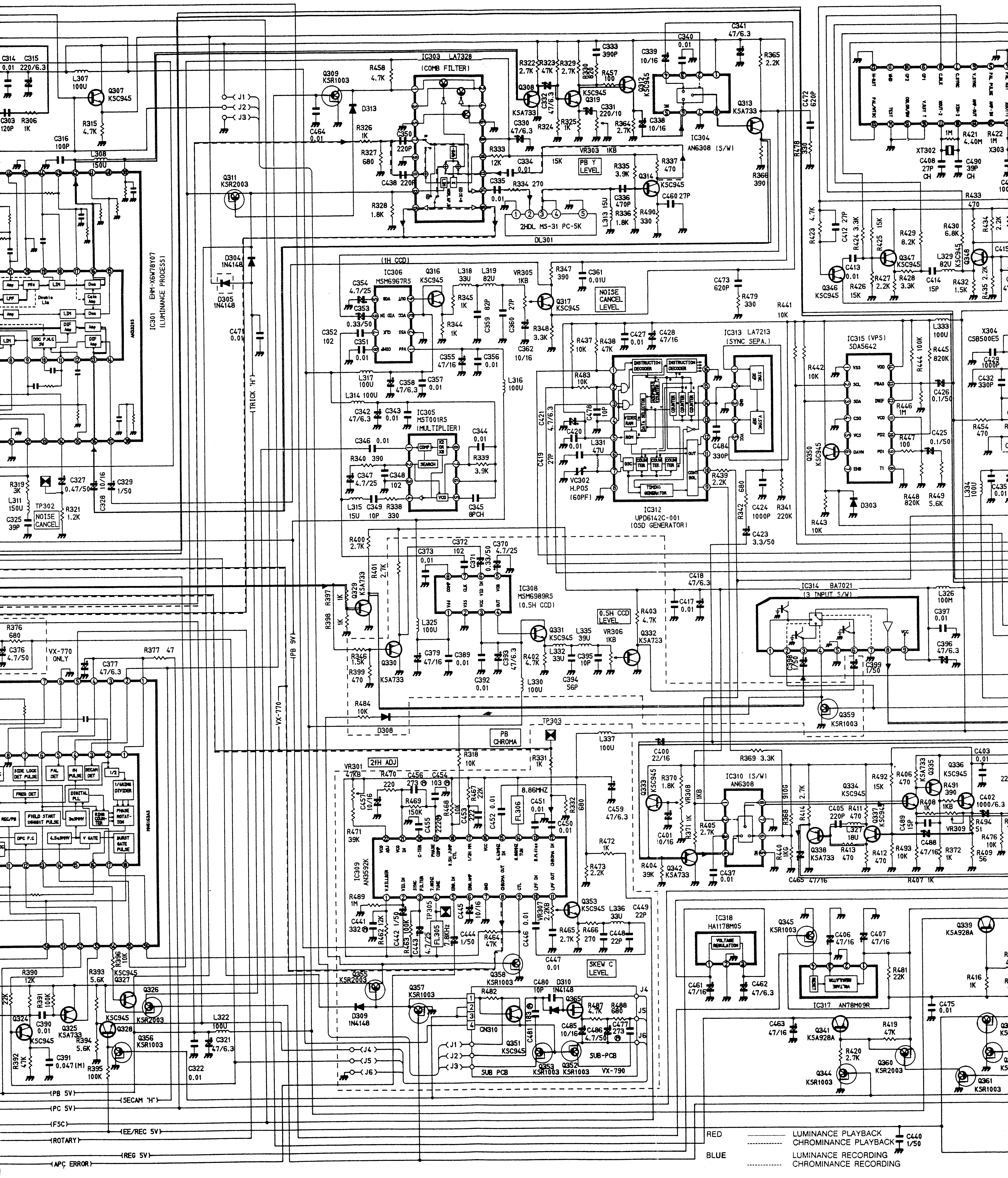
10-13. Luminance/Chrominance

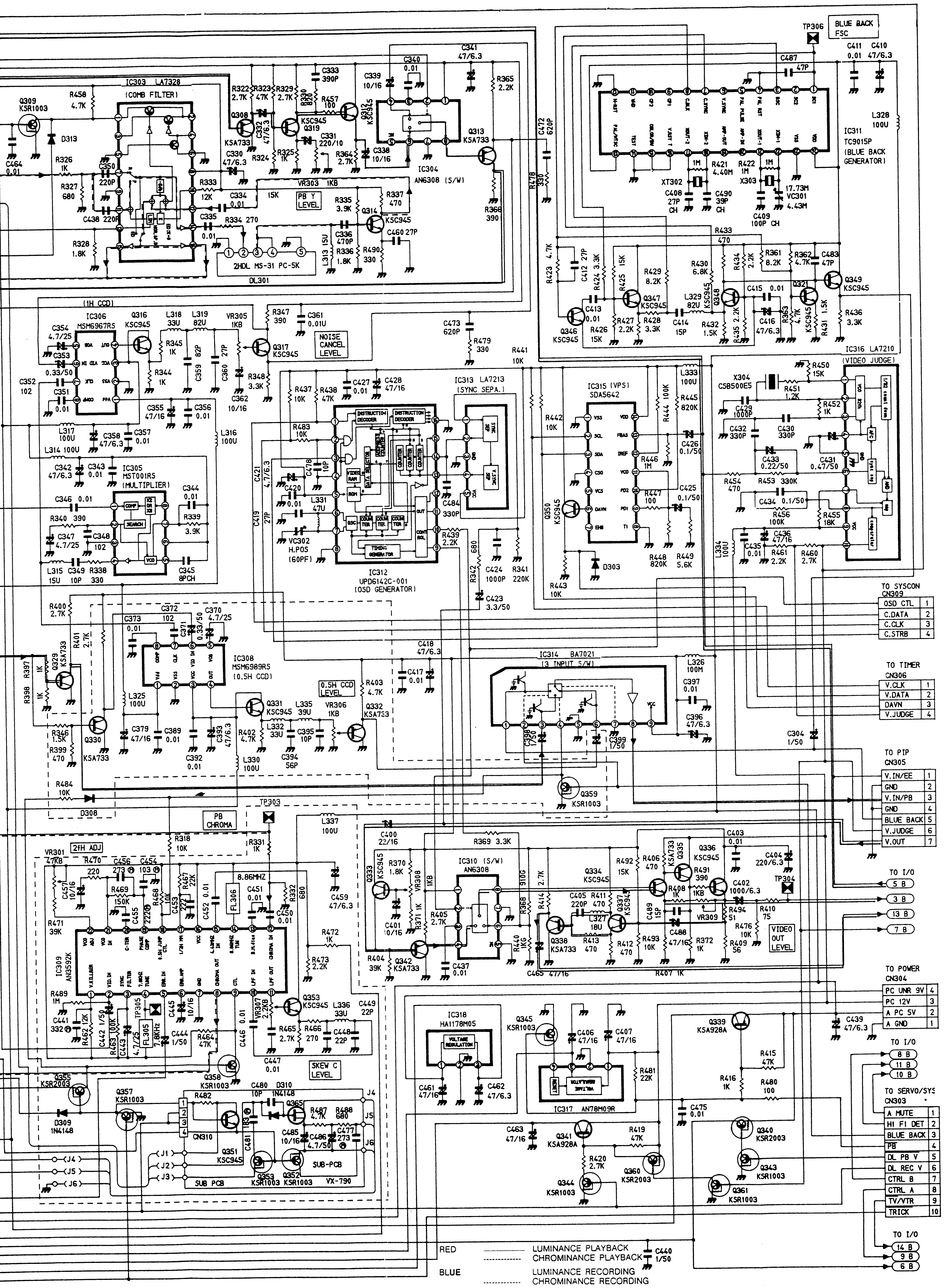

TO TIMER CN307
R486 6.8K
GND
PICTURE
PB 5V
TO PRE/AMP CN301
REC C
GND
PB C
D REC
REC.Y
GND
PB.Y
PB 5V
H.A SW
ENV
H SW P
SP/LP
R477 820
TO SERVO CN302
DOC
PB 9V
SP/LP
V.SYNC
F SC
A.GND
H SWP
ROTARY
H A SW
ENV
Q V.SYNC
TO HI FI CN308
GND
FSC
(REAR PANEL)
SW301
B/W
COL
C466 1000P
C467 0.01
C468 47/6.3
C469 1000P
C470 1000P
FL302
Q0138-C
VX-790 ONLY
L303 100U
C308 1800P
C307 220/6.3
C306 0.01
C497 330P
R497 1.8K
C309 0.33/50
R308 2.7K
Q304 KSC945
L305 22U
L304 150U
C311 15P
C310 390P
R367 1K
Q306 KSC945
R311 22K
C314 0.01
C315 220/6.3
L307 100U
Q307 KSC945
R309 390
L306 180
C312 47P
R310 270(770) 220(790)
R312 1.8K
R313 27K
C303 120P
R306 1K
R315 4.7K
C316 100P
Q305 KSR1003
R314 10K
L308 150U
J1
J2
J3
Q311 KSR2003
D304 1N4148
D305 1N4148
C471 0.01
(TRICK 'H')
IC301 EHM-X6W78Y07 (LUMINANCE PROCESS)
AN3285
AN3215K
R5 150K
R301 100K
Q301 KSR1003
D314 4.3EB2
C317 3.3/50
TO PB5V
C318 22/6.3
R302 2.2M
C319 2.2/50
C320 3.3/50
D302 1N4148
R316 680K
R317 680K
VR302 1KB
Q302 KSC945
R303 470
R304 470
L339 47U
R305 3.9K
C302 470
C479 39P
PB C LEVEL
C324 47/16
C323 1/50
SD301 1SS106
R319 3K
R320 5.6K
C326 1/50
L311 150U
C325 39P
TP302 NOISE CANCEL
C327 0.47/50
C328 10/16
C329 1/50
R321 1.2K
TP301
EE/PB VIDEO
C374 0.022
R375 4.7K
R376 680
C375 10/16
C376 4.7/50
VX-770 ONLY
R377 47
C377 47/6.3
R373 1K
R374 680
C363 0.01
IC307 BA7025L
R351 22K
C368 0.01
R357 100K
R349 10K
R350 1K
FL303 4.5MB
TP307
Q318 KSR1003
D306 1N4148
R352 1K
R354 150K
R353 2.2K
C369 33/10
FL304 7.8KHz
C364 33/10
SECAM DET LEVEL
C366 0.01
C367 47/6.3
L321 100U
FL301 SFB-4141
15.06 BPF
11.2M LPF
4.43 BPF
R358 1K
IC302 EHM-X6546Y08 (CHROMA PROCESS)
AN6367A3
MN6163A3
C305 0.01
R360 4.7K
Q315 KSA733
R359 1K
VX-770
C382 0.01
Q322 KSR2003
C383 1/50
C384 47/16
X301 4.433619
R388 6.8K
R387 8.2K
C388 220/6.3
R389 22K
R390 12K
R391 100K
R393 5.6K
R396 10K
KSC945 Q327
Q326
R378 22K
Q320 KSC945
R382 1K
R383 1.2K
C385 100P
Q323 KSC945
C387 0.01
Q324 KSC945
C390 0.01
Q325 KSA733
R394 5.6K
KSC945 Q328
KSR2003
L322 100U
C321 47/6.3
C378 0.01
R380 150
630K BPF
FL307
R379 12K
C380 0.01
L323 47U
R384 1.8K
R385 5.6K
R386 2.7K
C386 5PCH
L324 100U
R392 47K
C391 0.047(M)
R395 100K
Q356 KSR1003
C322 0.01
R381 820
NOTE
TR
DIGITAL TR
KSC945(NPN)
KSR1003(NPN)
KSA733(PNP)
KSR2003(PNP)
:VX-790 ONLY
PB 5V
SECAM 'H'
PC 5V
FSC
EE/REC 5V
ROTARY
REG 5V
APC ERROR


IC303 LA7328 (COMB FILTER)
IC304 AN6308 (S/W)
IC301 EHM-X6W78Y07 (LUMINANCE PROCESS)
IC306 MSM6967RS (1H CCD)
IC305 MST001RS (MULTIPLIER)
IC313 LA7213 (SYNC SEPA.)
IC312 UPD6142C-001 (OSD GENERATOR)
IC315 (VPS) SDA5642
IC308 MSM6989RS (0.5H CCD)
IC314 BA7021 (3 INPUT S/W)
IC309 AN3592K
IC310 (S/W) AN6308
IC318 HA1178M05
IC317 AN78M09R
DL301 2HDL MS-31 PC-5K
VR303 1KB PB Y LEVEL
VR305 1KB NOISE CANCEL LEVEL
VR306 1KB 0.5H CCD LEVEL
VR301 47KB 2fH ADJ
VC302 H.POS (60PF)
TP302 NOISE CANCEL
TP303
TP305
PB CHROMA
SKEW C LEVEL
FL306 8.86MHZ
FL305 7.8KHz
XT302
X303
X304 CSB500E5
VX-770 ONLY
SUB PCB
SUB-PCB VX-790
CN310
J1
J2
J3
J4
J5
J6
(TRICK 'H')
(PB 9V)
VX-770
(PB 5V)
(PC 5V)
(FSC)
(ROTARY)
(SECAM 'H')
(EE/REC 5V)
(REG 5V)
(APC ERROR)
RED ——— LUMINANCE PLAYBACK
- - - - - - CHROMINANCE PLAYBACK
BLUE ——— LUMINANCE RECORDING
- - - - - - CHROMINANCE RECORDING
C440 1/50

CE

LUMINANCE CHROMINANCE

LUMINANCE CHROMINANCE


IC303 LA7328 (COMB FILTER)
IC304 AN6308 (S/W)
DL301 2HDL MS-31 PC-5K
VR303 1KB PB Y LEVEL
IC311 TC9015P (BLUE BACK GENERATOR)
TP306 BLUE BACK FSC
X303 17.73M
XT302
VC301 4.43M
IC306 MSM6967RS (1H CCD)
VR305 1KB NOISE CANCEL LEVEL
IC305 MST001RS (MULTIPLIER)
IC313 LA7213 (SYNC SEPA.)
IC312 UPD6142C-001 (OSD GENERATOR)
VC302 H.POS (60PF)
IC315 (VPS) SDA5642
IC316 LA7210 (VIDEO JUDGE)
X304 CSB500E5
IC308 MSM6989RS (0.5H CCD)
VR306 1KB 0.5H CCD LEVEL
IC314 BA7021 (3 INPUT S/W)
TO SYSCON CN309
OSD CTL 1
C.DATA 2
C.CLK 3
C.STRB 4
TO TIMER CN306
V.CLK 1
V.DATA 2
DAVN 3
V.JUDGE 4
TO PIP CN305
V.IN/EE 1
GND 2
V.IN/PB 3
GND 4
BLUE BACK 5
V.JUDGE 6
V.OUT 7
TP303 PB CHROMA
VR301 47KB 2fH ADJ
IC309 AN3592K
TP305 FL305 7.8KHz
VR307 2.2KB SKEW C LEVEL
8.86MHZ FL306
IC310 (S/W) AN6308
TP304
VIDEO OUT LEVEL
TO I/O
5 B
3 B
13 B
7 B
TO POWER CN304
PC UNR 9V 4
PC 12V 3
A PC 5V 2
A GND 1
IC318 HA1178M05
IC317 AN78M09R
TO I/O
8 B
11 B
10 B
TO SERVO/SYS CN303
A MUTE 1
HI FI DET 2
BLUE BACK 3
PB 4
DL PB V 5
DL REC V 6
CTRL B 7
CTRL A 8
TV/VTR 9
TRICK 10
TO I/O
14 B
9 B
6 B
CN310 SUB PCB
SUB-PCB VX-790
RED — LUMINANCE PLAYBACK
---- CHROMINANCE PLAYBACK
BLUE — LUMINANCE RECORDING
---- CHROMINANCE RECORDING

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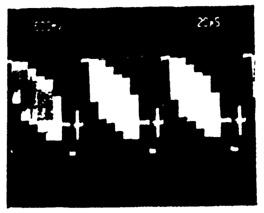
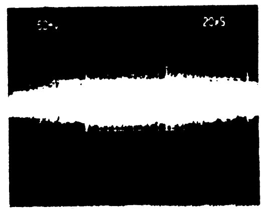
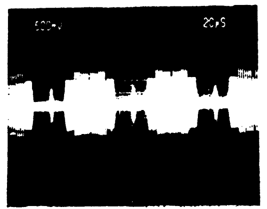
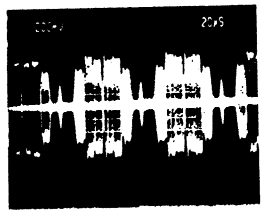
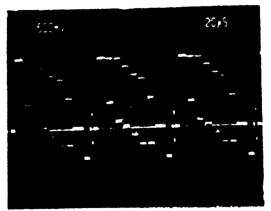
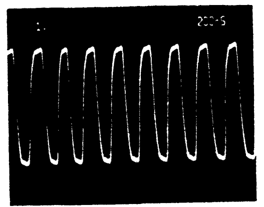

TP301
2Vp-p
REC/PB

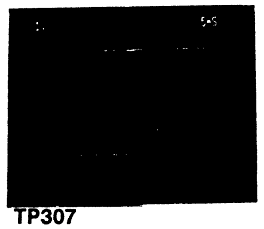

TP302
200mVp-p
PB

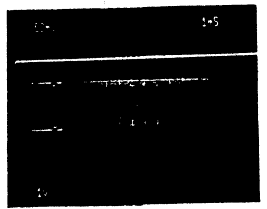

TP303
1.4Vp-p
REC

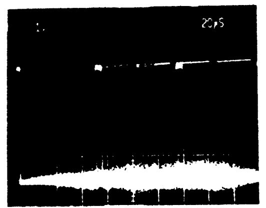

TP303
0.8Vp-p
PB

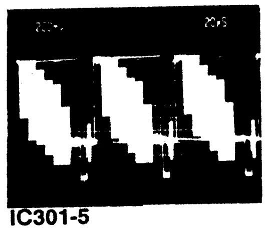

TP304
2Vp-p
REC/PB

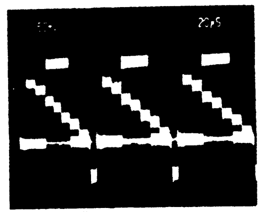

TP306
4.8Vp-p
REC/PB

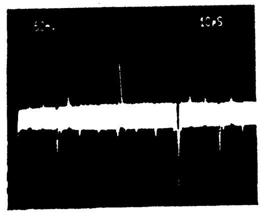

TP307
4.4Vp-p
REC/PB

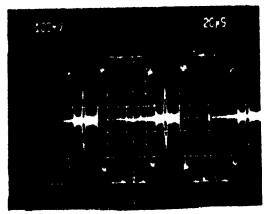

TP1(P/AMP)
110mVp-p
REC

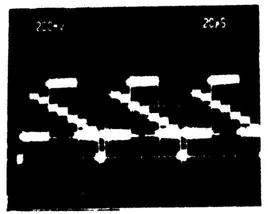

IC301-4
4.8Vp-p
REC/PB

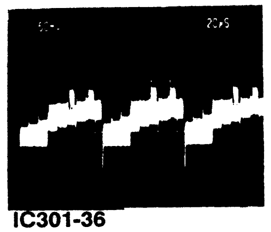

IC301-5
1Vp-p
REC

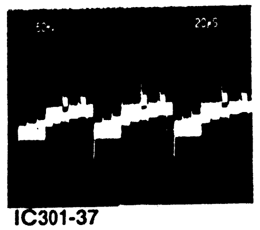

IC301-7
250mVp-p
PB

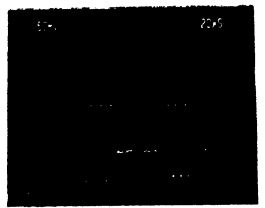

IC301-12
50mVp-p
PB

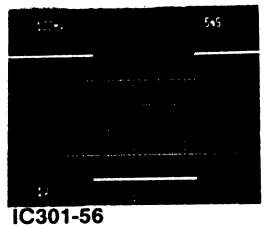

IC301-19
500mVp-p
PB

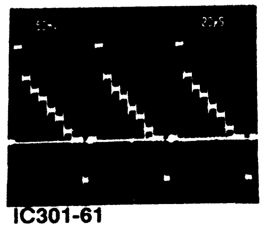

IC301-28
0.6Vp-p
REC/PB

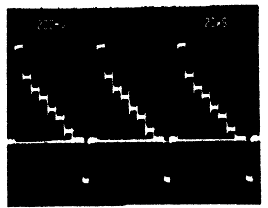

IC301-36
150mVp-p
PB

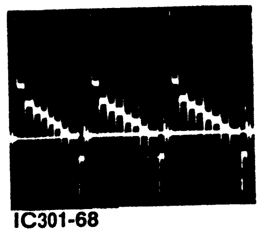

IC301-37
70mVp-p
PB

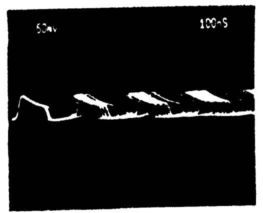

IC301-42
200mVp-p
PB

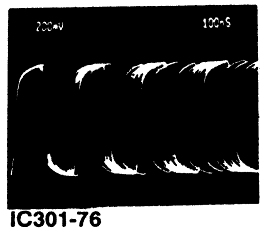

IC301-56
400mVp-p
PB

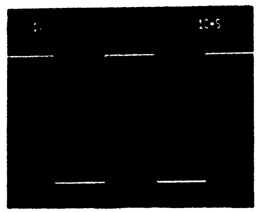

IC301-61
270mVp-p
REC/PB

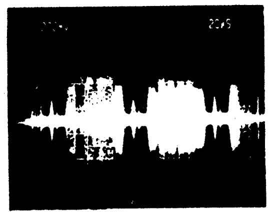

IC301-63
1Vp-p
REC/PB

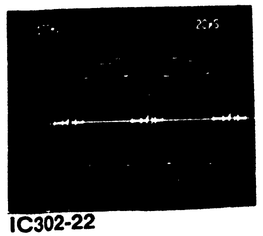

IC301-68
600mVp-p
REC

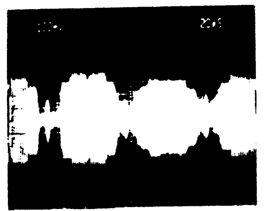

IC301-74
50mVp-p
REC

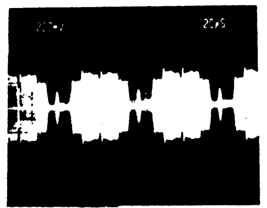

IC301-76
0.85Vp-p
REC

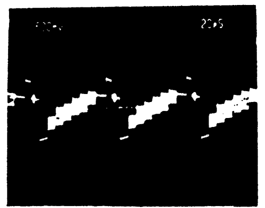

IC302-5
5Vp-p
REC/PB

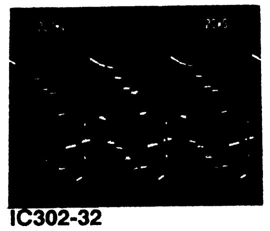

IC302-18
0.8Vp-p
PB

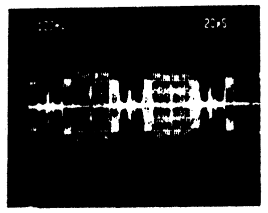

IC302-22
0.5Vp-p
REC

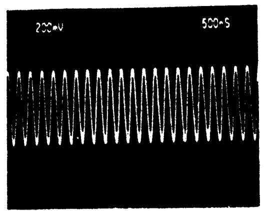

IC302-22
0.4Vp-p
PB

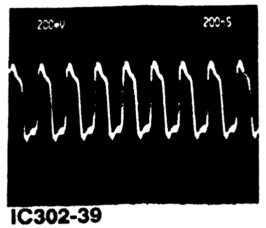

IC302-23
0.6Vp-p
REC/PB

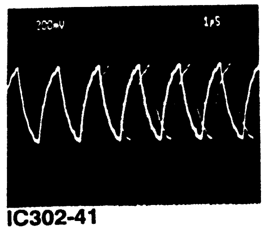

IC302-30
1.1Vp-p
REC/PB

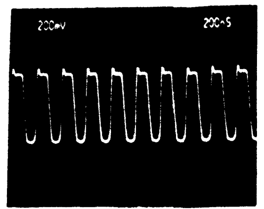

IC302-32
1Vp-p
REC

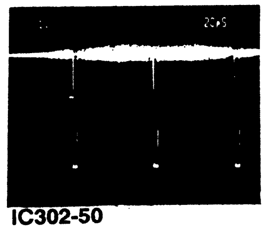

IC302-34
0.3Vp-p
PB

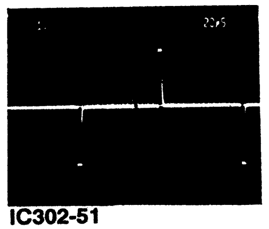

IC302-38
0.6 mVp-p
REC/PB

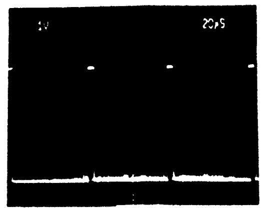

IC302-39
0.6 Vp-p
REC/PB

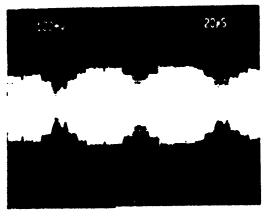

IC302-41
0.6 Vp-p
REC/PB

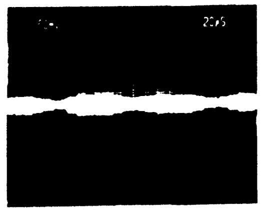

IC302-43
0.6Vp-p
REC/PB

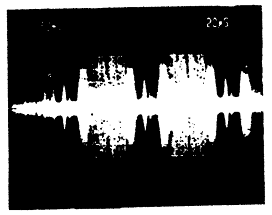

IC302-50
4.5 Vp-p
PB

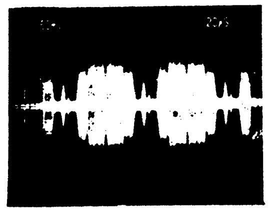

IC302-51
4.5 Vp-p
PB

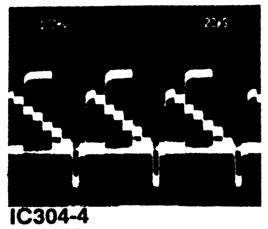

IC302-55
4.5Vp-p
REC/PB

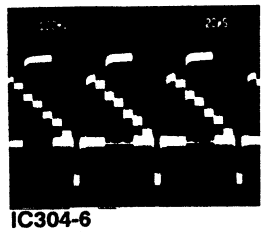

IC303-7
350mVp-p
PB

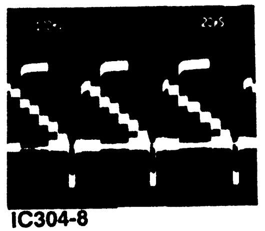

IC303-12
50mVp-p
PB

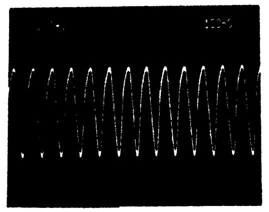

IC303-14
200mVp-p
PB

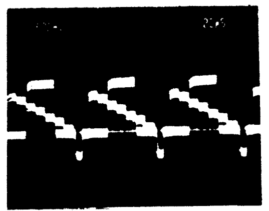

IC303-16
0.2Vp-p
PB

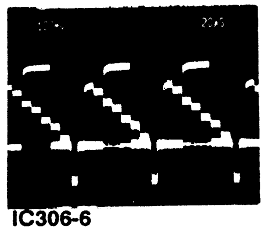

IC304-4
400mVp-p
PB

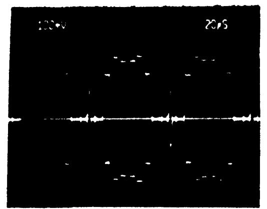

IC304-6
500mVp-p
PB

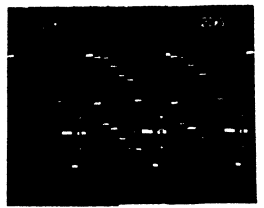

IC304-8
400mVp-p
PB

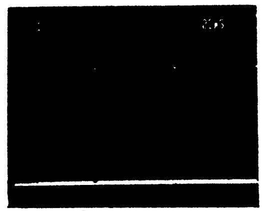

IC305-4
700mVp-p
PB

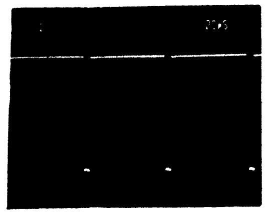

IC306-4
1.5Vp-p
PB

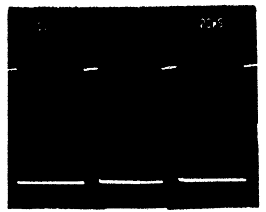

IC306-6
450mVp-p
PB

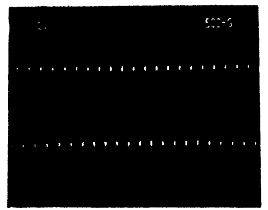

IC307-1
500mVp-p
REC

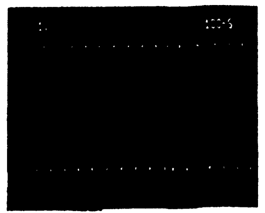

IC310-4
850mVp-p
REC/PB

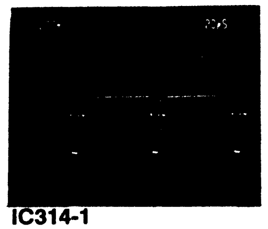

IC311-3
4.5Vp-p
REC/PB

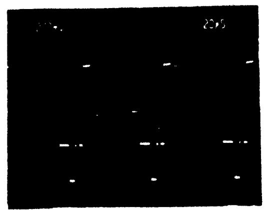

IC311-7
4.5Vp-p
REC/PB

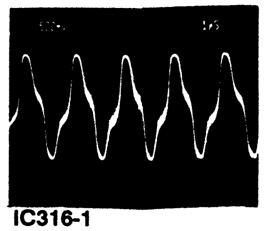

IC311-8
4.5Vp-p
REC/PB

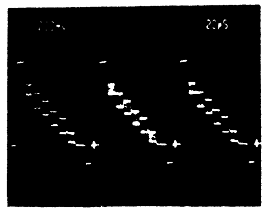

IC311-18
3Vp-p
REC/PB


IC311-22
5Vp-p
REC/PB


IC314-1
0.8Vp-p
REC/PB


IC314-3
0.9Vp-p
REC/PB


IC316-1
2Vp-p
REC/PB


IC316-6
0.8Vp-p
REC

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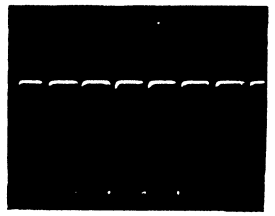
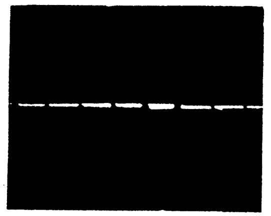
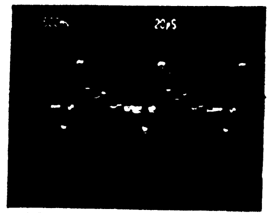
LUMINANCE CHROMINANCE



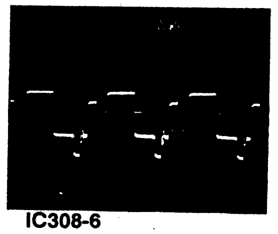
IC301-50 (J2)
4.2Vp-p (1V/5ms)
LP SEARCH (D.O.P)



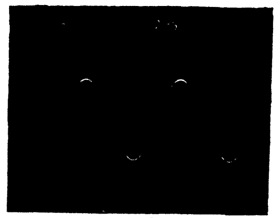
IC302-14
0.12Vp-p (0.1V/5ms)
LP SEARCH



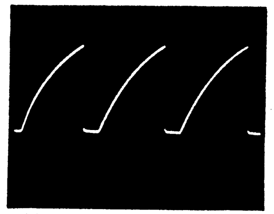
IC308-4
1.4Vp-p (0.5V/20us)
PB



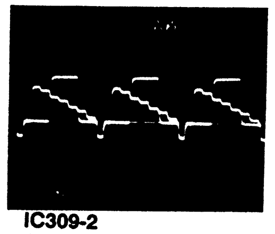
IC308-6
0.5Vp-p (0.2V/20us)
PB



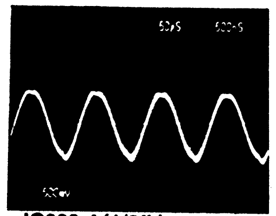
IC308-7 (3fsc)
0.6Vp-p (0.2/50us)
PB



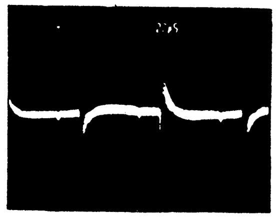
IC309-1
3.6Vp-p (1V/50us)
PB



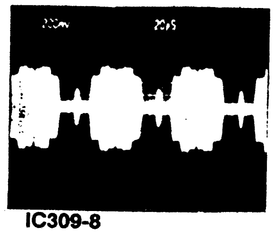
IC309-2
1.2Vp-p (0.5V/20us)
PB/EE



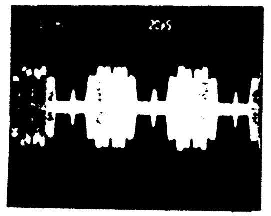
IC309-4 (1/2fh)
1.3Vp-p (0.5V/50us)
PB



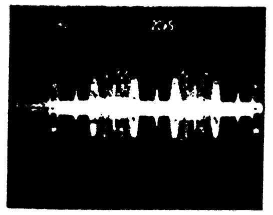
IC309-5 (APC ERROR)
0.18Vp-p (50mv/20us)
PB



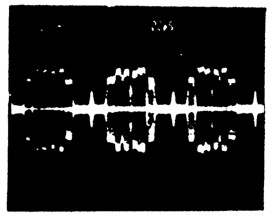
IC309-8
0.7Vp-p (0.2V/20us)
PB



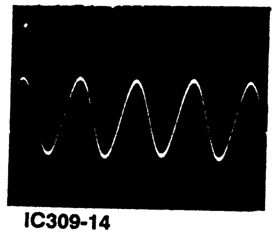
IC309-10
0.7Vp-p (0.1V/20us)
PB



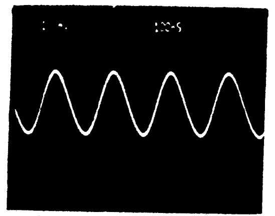
IC309-11
0.76Vp-p (0.2V/20us)
PB



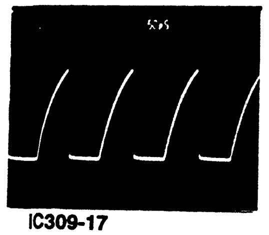
IC309-12
0.35Vp-p (0.1V/20us)
PB



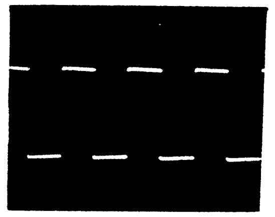
IC309-14
0.3Vp-p (50mv/50ms)
PB



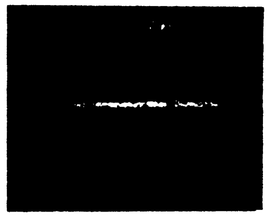
IC309-15
0.25Vp-p (0.1/100ms)
PB



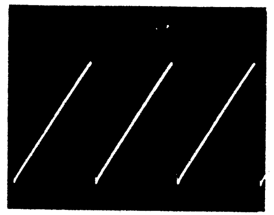
IC309-17
3.5Vp-p(1V/50us)
PB



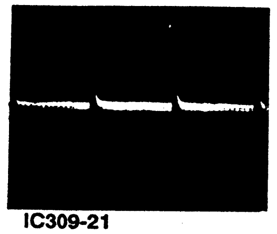
IC309-18
3.6Vp-p (1V/5ms)
SEARCH(LP/SP)



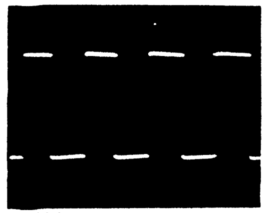
IC309-19
250mVp-p (0.1V/20us)
PB



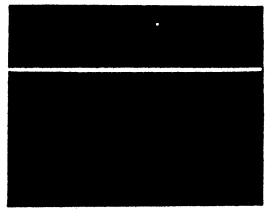
IC309-20
2.5Vp-p (0.5V/10us)
PB/EE



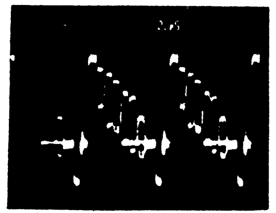
IC309-21
250mVp-p (0.1V/20us)
PB



IC314-4
2.1Vp-p (0.5V/5ms)
LP SEARCH



IC314-5
1.8Vp-p (0.5V/5ms)
SP SEARCH



IC314-6
1Vp-p (0.2V/20us)
PB

IC301 MAIN "A(VIDBO) C.B.A

IC LOC.NO	PIN NO.	STOP	RBC	PLAY
IC 301	1	0.4	0.4	0
IC 301	2	2.4	2.4	2.4
IC 301	3	2.5	2.5	2.5
IC 301	4	0.4	0.4	0.4
IC 301	5	2.8	2.8	2.8
IC 301	6	2.3	2.3	2.0
IC 301	7	3.2	3.2	3.1
IC 301	8	1.3	1.3	1.3
IC 301	9	0	0	0
IC 301	10	1.9	1.9	2.3
IC 301	11	0.7	0.7	2.5
IC 301	12	0.4	0.4	3.1
IC 301	13	0	0	0
IC 301	14	4.5	4.5	2.7
IC 301	15	0	0	0
IC 301	16	0	0	0
IC 301	17	0	0	0
IC 301	18	0	0	0
IC 301	19	3.9	3.9	4.0
IC 301	20	2.2	2.2	0
IC 301	21	0	0	0
IC 301	26	0	0	0
IC 301	27	0	0	0
IC 301	28	1.6	1.6	1.6
IC 301	29	0	0	2.8
IC 301	30	0.1	0.1	3.1
IC 301	31	0	0	0
IC 301	32	0	0	1.4
IC 301	33	0.1	0.1	2.4
IC 301	34	0	0	0
IC 301	35	0	0	0.1
IC 301	36	0	0	3.6
IC 301	37	0	0	3.6
IC 301	38	0	0	0
IC 301	39	0	0	1.5
IC 301	40	0	0	0
IC 301	41	0	0	1.5
IC 301	42	0	0	1.5
IC 301	43	0	0	1.7
IC 301	44	0.1	0.1	2.1
IC 301	45	0	0	0
IC 301	46	0	0	3.7
IC 301	47	0.2	0.2	4.8
IC 301	48	0	0	3.2
IC 301	49	0	0	0.9
IC 301	50	0.3	0.3	4.9
IC 301	51	0	0	0
IC 301	56	0	0	3.2
IC 301	57	0.2	0.2	4.8
IC 301	58	0	0	0
IC 301	59	0	0	0
IC 301	60	0	0	0
IC 301	61	1.4	1.4	1.4
IC 301	62	0	0	0
IC 301	63	2.4	2.4	2.4
IC 301	64	0	0	0
IC 301	65	0.9	0.9	0.9
IC 301	66	4.0	4.0	4.0
IC 301	67	4.9	4.9	4.9
IC 301	68	2.1	2.1	2.1
IC 301	69	2.1	2.1	2.1
IC 301	70	0	0	0

IC302 MAIN "A(VIDBO) C.B.A

IC LOC.NO	PIN NO.	STOP	RBC	PLAY
IC 301	71	2.0	2.0	2.0
IC 301	72	3.2	3.2	3.2
IC 301	73	2.7	2.7	2.7
IC 301	74	2.9	2.9	2.9
IC 301	75	0	0	0
IC 301	76	3.3	3.3	4.4

IC302 MAIN "A(VIDBO) C.B.A

LOC.NO	PIN	STOP	RBC	PLAY
IC 302	1	5.0	5.0	5.0
IC 302	2	0.3	0.3	4.2
IC 302	3	0.3	0.3	0.3
IC 302	4	5.0	5.0	5.0
IC 302	5	0	0	0
IC 302	6	0	0	0
IC 302	7	4.9	4.9	4.9
IC 302	13	2.5	2.5	2.5
IC 302	14	2.5	2.5	2.5
IC 302	15	1.1	1.1	1.1
IC 302	16	0	0	0
IC 302	17	2.7	2.7	2.6
IC 302	18	2.0	2.0	2.0
IC 302	19	2.4	2.4	1.8
IC 302	20	0	0	0
IC 302	21	2.4	2.4	2.4
IC 302	22	3.5	3.5	3.5
IC 302	23	0	0	0
IC 302	24	0	0	0
IC 302	25	0	0	0
IC 302	26	0	0	1.7
IC 302	27	0	0	0
IC 302	28	0	0	0
IC 302	29	0	0	0
IC 302	30	3.2	3.2	2.7
IC 302	31	3.2	3.2	2.7
IC 302	33	4.9	4.9	0.2
IC 302	34	0.2	0.2	4.8
IC 302	35	4.4	4.4	3.0
IC 302	36	3.2	3.2	3.2
IC 302	37	3.2	3.2	3.2
IC 302	38	2.9	2.9	2.9
IC 302	39	2.8	2.8	3.2
IC 302	40	4.9	4.9	4.9
IC 302	41	3.9	3.9	3.9
IC 302	42	1.8	1.8	1.8
IC 302	43	4.1	4.1	4.1
IC 302	44	0	0	0
IC 302	50	4.7	4.7	4.6
IC 302	51	2.5	2.5	2.5
IC 302	52	0.2	0.2	4.8
IC 302	53	0	0	0.1
IC 302	54	0.2	0.2	0.3
IC 302	55	0.4	0.4	0.4
IC 302	56	0	0	0

IC MAIN "A(VIDBO) C.B.A

IC LOC.NO	PIN NO.	STOP	RBC	PLAY
IC 303	1	0.2	0.2	4.7
IC 303	2	0	0	2.1
IC 303	3	0	0	2.1
IC 303	4	0	0	0
IC 303	5	0	0	0
IC 303	6	0	0	0
IC 303	7	0.1	0.1	2.4
IC 303	8	0.2	0.2	4.8
IC 303	9	0	0	0
IC 303	10	0.2	0.2	2.9
IC 303	11	0.1	0.1	2.4
IC 303	12	0	0	2.6
IC 303	13	0	0	1.6
IC 303	14	0	0	1.7
IC 303	15	0	0	2.3
IC 303	16	0	0	2.3
IC 304	1	0.2	0.2	4.8
IC 304	2	0	0	4.3
IC 304	3	0	0	2.4
IC 304	4	0	0	2.5
IC 304	5	0	0	0
IC 304	6	0	0	2.5
IC 304	7	0	0	0
IC 304	8	0	0	2.5
IC 305	1	0	0	2.6
IC 305	2	0	0	2.2
IC 305	3	0	0	0
IC 305	4	0	0	3.2
IC 305	5	0	0	3.2
IC 305	6	0.2	0.2	4.9
IC 305	7	0.2	0.2	3.5
IC 305	8	0.1	0.1	3.5
IC 306	1	0.6	0.6	8.8
IC 306	2	0	0	0
IC 306	3	0.2	0.2	4.9
IC 306	4	0	0	3.3
IC 306	5	0	0	3.2
IC 306	6	0	0	2.2
IC 306	7	0	0	1.5
IC 306	8	0	0	4.6
IC307	1	3.6	3.6	3.6
IC307	2	0.2	0.2	1.0
IC307	3	0	0	0
IC307	4	3.6	3.6	3.6
IC307	5	4.6	4.6	4.6
IC307	6	0	0	0
IC307	7	4.4	4.4	4.4
IC307	8	0	0	0
IC307	9	3.0	3.0	3.0
IC307	10	0	0	0
IC307	11	3.6	3.6	3.6
IC307	12	0	0	1.9
IC307	13	3.6	3.6	3.6
IC307	14	0	0	1.8
IC307	15	0	0	0
IC307	16	0	0	0
IC307	17	5.0	5.0	5.0
IC307	18	5.0	5.0	5.0

IC MAIN "A"(VIDBO) C.B.A

IC LOC.NO	PIN NO.	STOP	RBC	PLAY
IC311	1	2.5	2.5	2.5
IC311	2	2.5	2.5	2.5
IC311	3	0.2	0.2	0.2
IC311	4	0	0	0
IC311	5	2.5	2.5	2.5
IC311	6	0	0	0
IC311	7	1.3	1.3	1.3
IC311	8	1.3	1.3	1.3
IC311	9	0.1	0.1	0.1
IC311	10	0.4	0.4	0.4
IC311	11	0.8	0.8	0.8
IC311	12	0	0	0
IC311	13	5.0	5.0	5.0
IC311	14	0	0	0
IC311	15	0	0	0
IC311	16	0	0	0
IC311	17	2.2	2.2	2.2
IC311	18	2.5	2.5	2.5
IC311	19	0	0	0
IC311	20	4.8	4.8	4.8
IC311	21	2.6	2.6	2.6
IC311	22	2.6	2.6	2.6
IC311	23	0	0	0
IC311	24	5.0	5.0	5.0
IC315	1	0	0	0
IC315	2	5.0	5.0	5.0
IC315	3	5.0	5.0	5.0
IC315	4	0	0	0
IC315	5	0.5	0.5	4.9
IC315	6	4.9	4.9	4.9
IC315	7	0	0	0
IC315	8	0	0	0
IC315	9	2.1	2.1	0.1
IC315	10	1.8	1.8	1.3
IC315	11	2.1	2.1	0
IC315	12	3.4	3.4	4.9
IC315	13	1.6	1.6	1.2
IC315	14	5.0	5.0	5.0
IC317	1	11.8	11.8	11.8
IC317	2	0	0	0
IC317	3	0.6	0.6	8.9
IC317	4	0	0	10.2

TR MAIN " A "(VIDEO) C.B.A									
MODE	STOP			REC			PLAY		
TR NO.	E	B	C	E	B	C	E	B	C
Q 301	0	-0.5	0.4	0	-0.5	0.4	0	10.8	0
Q 302	2.0	2.7	3.9	2.0	2.7	3.9	0	0	5.0
Q 304	0	0.2	0.2	0	0.2	0.2	3.2	3.8	4.8
Q 307	0	0.3	0.2	0	0.3	0.2	4.2	4.9	4.9
Q 308	0.2	0	0	0.2	0	0	2.2	1.5	0
Q 309	0	0.3	0.2	0	0.3	0.2	0	0.3	4.7
Q 311	0.2	0.2	0	0.2	0.2	0	4.8	4.8	1.6
Q 312	0	0.2	0.2	0	0.2	0.2	2.7	3.4	4.9
Q 313	0.2	0	0	0.2	0	0	3.1	2.5	0.3
Q 314	0	0	0.2	0	0	0.2	0.9	1.5	3.6
Q 315	2.0	1.3	0	2.0	1.3	0	0.7	0	0
Q 316	0	0	0.2	0	0	0.2	2.6	3.3	5.0
Q 317	0	0	0.2	0	0	0.2	2.0	2.6	4.6
Q 318	0	2.4	0	0	2.4	0	0	0	2.8
Q 319	0	0	0.2	0	0	2.2	0.5	1.2	3.4
Q 320	0	0.2	0.2	0	0.2	0.2	1.0	1.7	3.8
Q 321	1.6	2.2	4.0	1.6	2.2	4.0	1.6	2.2	4.0
Q 322	4.9	0.2	4.9	4.9	0.2	4.9	4.9	4.8	-0.2
Q 323	2.2	2.8	5.0	2.2	2.8	5.0	2.2	2.8	4.9
Q 324	2.0	2.6	4.4	2.0	2.6	4.4	2.0	2.5	4.4
Q 325	4.9	4.8	0	4.9	4.8	0	4.9	4.9	0
Q 326	5	5	0	5	5	0	5	5	0
Q 326	4.9	4.9	0	4.9	4.9	0	4.9	4.9	0
Q 327	0	0	0	0	0	0	1.6	0.3	4.9
Q 328	2.6	0	2.5	2.6	0	2.5	2.6	0	2.5
Q 329	1.6	1.0	0	1.6	1.0	0	2.0	1.3	0
Q 333	0	1.4	5.0	0	1.4	5.0	0	1.8	5.0
Q 334	1.8	2.4	11	1.8	2.4	11	1.8	2.4	11
Q 335	12	11	3	12	11	3	12	11	3
Q 336	2.3	2.6	5	2.3	2.6	5	2.5	3.1	4.9
Q 337	1.2	1.8	3.7	1.2	1.8	3.7	1.2	1.8	3.7
Q 338	1.9	1.2	0	1.9	1.2	0	0	1.2	1.9
Q 339	5.0	0.2	5.0	5.0	0.2	5.0	5.0	4.3	5.0
Q 340	5	0	5	5	0	5	5	5	0
Q 341	12.0	12.0	11.0	12.0	12.0	11.0	12.0	12.0	0
Q 342	2.4	1.8	0	2.4	1.8	0	2.4	1.8	0
Q 343	0	5	0	0	5	0	0	0	5
Q 344	0	0	11.8	0	4.4	0	0	0	12
Q 345	0	5	0	0	5	0	0	5	0
Q 346	2.6	1	2.6	2.6	1	2.6	2.6	1	2.6
Q 348	2.0	2.6	4.0	2.0	2.6	4.0	2.0	2.6	4.0
Q 349	3.4	4.0	5.0	3.4	4.0	5.0	3.4	4.0	5.0
Q 350	4.3	5	5	4.2	5	5	4.2	5	5
Q 356	0	0.1	0	0	4.4	0	0	0.1	0
Q 360	12.0	12.0	11.0	12.0	12.0	11.0	12.0	0	12
Q 361	0	12	0	0	12	0	0	11	0

MODE	STOP			REC			PLAY			REW			F. FWD			REV. S			FWD.S		
TR NO.	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
Q 330	1.1	0.5	0	1.1	0.5	0	1.2	0.5	0	1.1	0.5	0	1.1	0.5	0	1.1	0.5	0	1.1	0.5	0
Q 331	0	0	0.4	0	0	0.4	2.6	3.3	5.0	0	0	0.4	0	0	0.4	2.6	3.3	4.9	2.6	3.3	4.9
Q 332	0.7	0	0	0.7	0	0	2.6	2.0	0	0.7	0	0	0.7	0	0	2.6	2.0	0	2.6	2.0	0
Q 351(SP)	0	0	0.4	0	0	0.4	0	0	4.8	0	0	0.4	0	0	0.4	0.2	0.8	4.8	0.2	0.8	4.8
Q 351(LP)	0	0	0.4	0	0	0.4	0	0	4.8	0	0	0.4	0	0	0.4	4.2	4.8	4.8	4.2	4.8	4.8
Q 352(SP)	0	0	0.1	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0.3	0	0.2	0.3
Q 352(LP)	0	0	0.1	0	0	0	0	0	0.2	0	0	0	0	0	0	0	4.0	0	0	4.0	0
Q 353	2.9	3.5	5.0	2.9	3.5	5.0	2.9	3.5	5.0	2.9	3.5	5.0	2.9	3.5	5.0	2.9	3.5	5.0	2.9	3.5	5.0
Q 355(SP)	4.9	0	4.9	4.9	0	4.9	4.9	0	4.9	4.9	0	4.9	4.9	0	4.9	4.9	0.8	4.9	4.9	0.8	4.9
Q 355(LP)	4.9	0	4.9	4.9	0	4.9	4.9	0	4.9	4.9	0	4.9	4.9	0	4.9	4.9	4.8	0	4.9	4.8	0
Q 357(SP)	0	4.2	0	0	4.2	0	0	4.2	0	0	4.2	0	0	4.2	0	0	0	0.8	0	0	0.0
Q 357(LP)	0	4.2	0	0	4.2	0	0	4.2	0	0	4.2	0	0	4.2	0	0	0	4.8	0	0	4.8
Q 358(SP)	0	4.9	0	0	4.9	0	0	4.9	0	0	4.9	0	0	4.9	0	0	4.9	0	0	4.9	0
Q 358(LP)	0	4.9	0	0	4.9	0	0	4.9	0	0	4.9	0	0	4.9	0	0	0	4.9	0	0	4.9
Q 363(SP)	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0	0.2	3.8	0	0.2	3.8
Q 363(LP)	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0	4.2	0	0	4.2	0
Q 365	2.5	0	2.5	0.9	0	2.5	2.5	0.1	2.5	2.5	0.2	2.5	2.5	0.2	2.5	2.6	0.1	2.5	2.6	0.1	2.5
	(D)	(G)	(S)	(D)	(G)	(S)	(D)	(G)	(S)	(D)	(G)	(S)	(D)	(G)	(S)	(D)	(G)	(S)	(D)	(G)	(S)

IC309							
PIN NO	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
1	2.2	2.2	2.0	2.1	2.2	2.1	2.1
2	3.0	3.0	3.0	3.0	3.0	3.2	3.1
3	3.4	3.4	3.4	3.4	3.4	3.4	3.5
4	5.0	5.0	5.0	5.0	5.0	5.0	4.9
5	3.2	3.2	3.2	3.2	3.2	3.2	3.1
6	2.5	2.5	2.5	2.5	2.5	2.5	2.5
7	0	0	0	0	0	0	0
8	2.7	2.7	2.6	2.7	2.7	2.6	2.6
9(SP)	0	0	0	0	0	0	0
9(LP)	0	0	0	0	0	4.9	4.9
10	3.3	3.3	3.2	3.3	3.3	3.3	3.2
11	3.6	3.6	3.5	3.6	3.6	3.5	3.5
12	3.3	3.3	3.2	3.3	3.3	3.2	3.2
13	3.3	3.3	3.2	3.3	3.3	3.2	3.2
14	5.0	5.0	5.0	5.0	5.0	5.0	5.0
15	5.0	5.0	5.0	5.0	5.0	5.0	5.0
16	5.0	5.0	5.0	5.0	5.0	5.0	5.0
17	1.7	1.7	1.4	1.9	1.9	1.4	1.3
18(SP)	4.0	4.0	4.0	0.1	0.1	4.0	4.0
18(LP)	4.0	4.0	4.0	0.1	0.1	2.0	1.6
19	2.5	2.5	2.5	2.5	2.5	2.5	2.5
20	2.5	2.5	2.5	2.5	2.5	2.5	2.5
21	2.5	2.5	2.5	2.5	2.5	2.4	2.4
22	0.8	0.8	0.8	0.8	0.8	0.8	0.8

IC308							
PIN NO	STOP	REC	PLAY	REW	F.FWD	REV S.	FWD S.
1	0.6	0.6	8.9	0.6	0.6	8.9	8.9
2	0	0	0	0	0	0	0
3	0.4	0.4	4.9	0.4	0.4	4.9	4.9
4	0	0	3.3	0	0	3.3	3.3
5	0.2	0.2	3.3	0.2	0.2	3.3	3.3
6	0	0	2.2	0	0	2.2	2.2
7	0	0	1.6	0	0	1.6	1.6
8	0.5	0.5	4.6	0.5	0.5	4.6	4.6